

TOSHIBA

OWNER'S MANUAL

Projection Television

COLORSTREAM®

53AX61

Owner's Record

The model number and serial number are on the back of your TV. Record these numbers in the spaces below. Refer to these numbers whenever you communicate with your Toshiba dealer about this TV.

Model number:

53AX61

Serial number:

Introduction

Connecting
your TV

Using the
Remote Control

Setting up
your TV

Using the TV's
Features

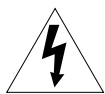
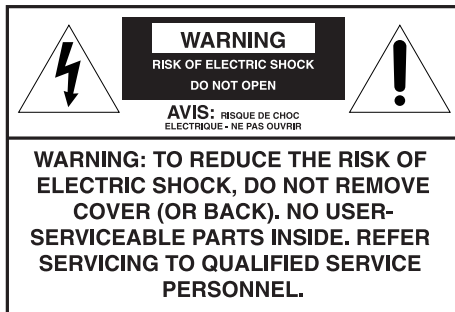
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Important Information

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



The lightning symbol in the triangle tells you that the voltage inside this product may be strong enough to cause an electric shock. **DO NOT TRY TO SERVICE THIS PRODUCT YOURSELF.**



The exclamation mark in the triangle tells you that important operating and maintenance instructions follow this symbol.

CAUTION

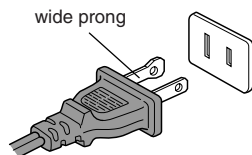
TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED PLUG WITH AN EXTENSION CORD RECEPTACLE OR OTHER OUTLET UNLESS THE PRONGS CAN BE FULLY INSERTED INTO THE OUTLET TO PREVENT ANY EXPOSURE OF THE PRONGS ON THE POLARIZED PLUG.

ATTENTION

POUR PRÉVENIR LES CHOCs ÉLECTRIQUES NE PAS UTILISER CETTE FICHE POLARISÉE AVEC UN PROLONGATEUR, UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ÊTRE INSÉRÉS À FOND SANS EN LAISSER AUCUNE PARTIE À DÉCOUVERT.

CAUTION

The plug has one prong wider than the other and will fit only one way into a standard electrical outlet (120 volt AC, 60 Hz). If the plug does not fit into the outlet, try turning it around. If the plug still does not fit, the outlet is probably non-standard and must be replaced by a qualified electrician. Do not tamper with the plug or try to force it into a non-standard outlet.



Note to CATV system installers in the USA

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC, which provides guidelines for proper grounding, and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Precautions

Installing your TV

- Place the TV on the floor or on a sturdy platform. The mounting surface should be flat and steady. If you install the TV on a soft floor, make sure that the floor is not damaged by the weight of the TV.
- Place the TV far enough away from the walls to allow proper ventilation. This will prevent the TV from overheating and avoid possible damage to the TV. Avoid dusty areas too.
- Damage may occur if you leave the TV in direct sunlight or near a heater. Avoid areas subject to extremely high temperatures or humidity, and temperatures of 41°F(5°C) or lower.

Using your TV

- Do not stand or climb on the TV.
- Do not put any heavy object on top of the TV.
- Do not place containers with liquids such as drinks or cosmetics on the TV. If any foreign material or water leaks into the TV, unplug the AC cord and contact your dealer.
- If the room temperature suddenly rises, condensation may occur on the lenses resulting in picture distortion or color fading. In such a case, simply wait a while (with the power on) and the condensation will evaporate.
- Avoid displaying stationary images on your TV screen for extended periods of time. Stationary patterns generated by a picture-in-picture (PIP) display, Multi-Window display, computer displays, video games, stock market reports, etc., can become permanently engrained on the picture tube. This damage is not protected by your warranty because it is the result of misuse. If you wish to use your TV to display still images, reduce brightness and contrast settings. Never leave a PIP, Multi-Window, computer, or video game display unattended.
- Sit approximately 10–25 feet away from the TV. Sitting too far to the left or right of the screen will cause the picture to appear dull as will direct sunlight and room lights. Turn the TV off to check for reflections on the screen. Then remove the source of any reflections while viewing.

Cleaning your TV

- Clean the TV with a soft dry, cloth. Never use strong solvents, such as thinner or benzine, which might damage the finish of the cabinet. If the cabinet is very dirty, use a damp cloth to wipe the cabinet clean and then finish with a dry cloth.

NOTICE OF POSSIBLE ADVERSE EFFECTS ON TV PICTURE TUBE

Extensive viewing of fixed (non-moving) images or patterns can cause uneven aging of the picture tube, and leave a subtle but permanent ghost image in the picture. This type of damage is **NOT COVERED BY YOUR WARRANTY**. Never leave the TV on and unattended for long periods of time while the following formats or images are displayed:

- **Fixed images**, such as PIP/POP windows, stock tickers, video game patterns, TV station logos, and websites.
- **Special formats** that do not use the entire screen. For example, viewing letterbox style (16:9) media on a normal (4:3) display (bars at top and bottom of screen), or viewing normal (4:3) media on a widescreen (16:9) display (bars on left and right sides of screen).

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Introduction

Welcome to Toshiba

Congratulations! You have purchased one of the finest projection TVs on the market. The goal of this manual is to guide you through setting up and operating your Toshiba TV as quickly as possible.

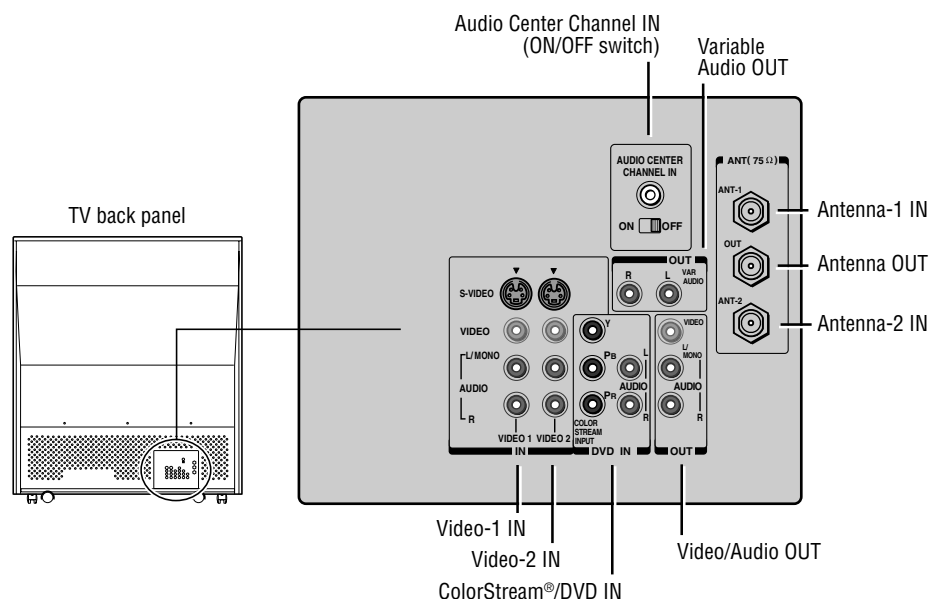
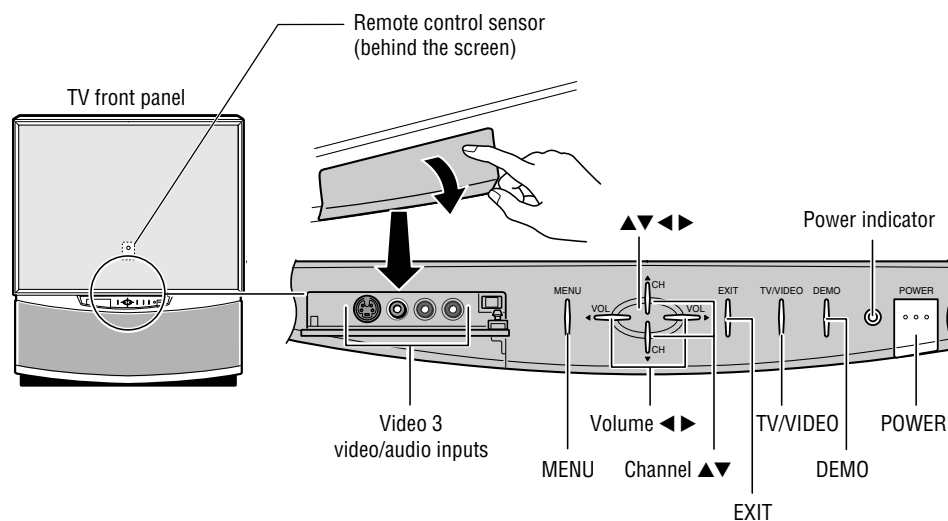
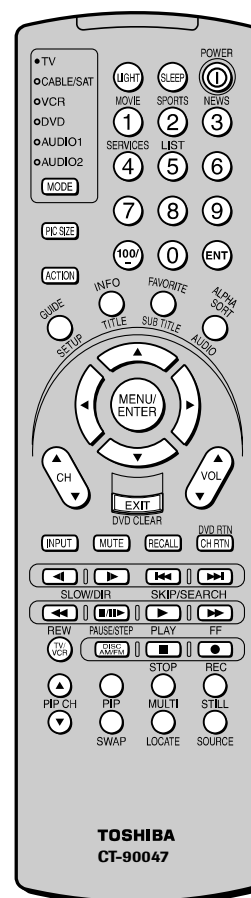
This manual applies to model 53AX61.

Instructions in this manual are based on using the remote control. You can also use the buttons on the TV front panel if they have the same name as those on the remote control.

Please read all the safety and operating instructions carefully, and keep the manual for future reference.

Exploring your new TV

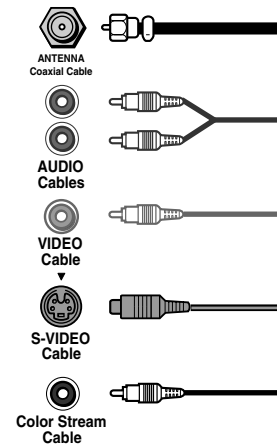
You can operate the TV using the buttons on the front panel or remote control. The back panel and front panel (behind the door) provide all the terminal connections you will need to connect other equipment to the TV (see "Connecting your TV" on page 5).



Connecting your TV

If you have not connected electronic equipment before, or you have been frustrated in the past, you may wish to read this section. (Cables are not supplied.)

- A coaxial cable is the standard cable that comes in from an antenna or cable converter box. Coaxial cables use "F" connectors.
- Audio and video cables are usually color-coded according to use: yellow for video, and red and white for audio. The red audio cable is for the stereo right channel, and the white audio cable is for the stereo (or mono) left channel. On the rear panel of the TV, the terminals are color-coded in the same manner as the cables.
- S-video cables provide better picture performance than regular video cables. S-video cables can only be used with S-video compatible components.
- ColorStream® (component video) cables come in sets of three, and can only be used with component video-compatible components. A component video connection provides the best picture performance.



Caution:

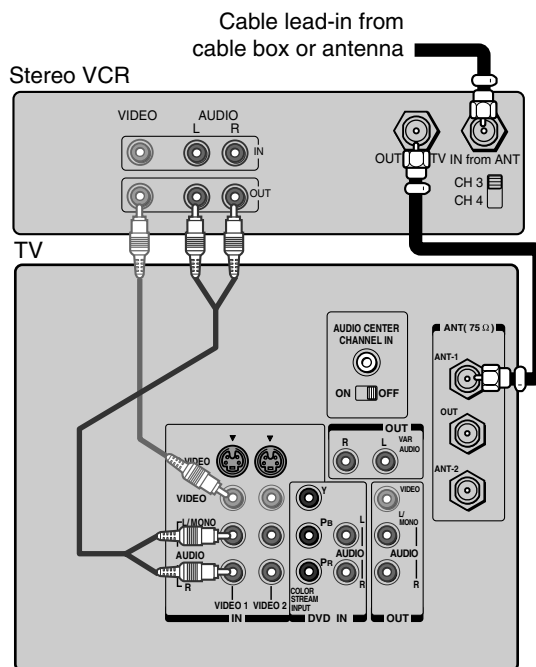
Do not plug in the TV until you have finished connecting all equipment.

Connecting a VCR

This connection allows you to watch local channels and video programs, play or record on the VCR while watching TV, and record from one channel while watching another channel.

You will need:

- one coaxial cable
- one pair of audio cables (one single audio cable for a mono VCR)
- one video cable



Caution:

If you have a mono VCR, connect L/Mono to VCR Audio OUT using only one audio cable.

If you have an S-VHS VCR, use the S-video connections and remove the video cable.

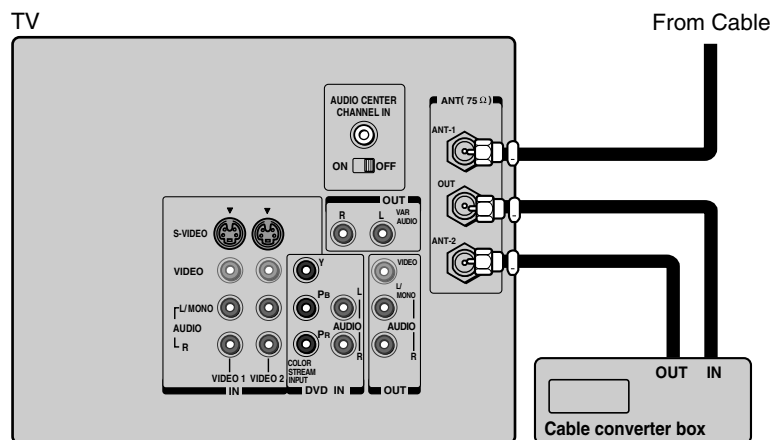
Do not connect a regular video cable and an S-video cable to Video-1 (or Video-2) at the same time, or the picture will be distorted.

Connecting a cable converter box

This connection allows you to watch cable and premium channels. To use the TV's features, select ANT-1. To view premium channels, select ANT-2 and tune the TV to channel 3 or 4 (whichever is vacant in your area), and then use the converter box to change channels.

You will need:

- one coaxial cable



Note:

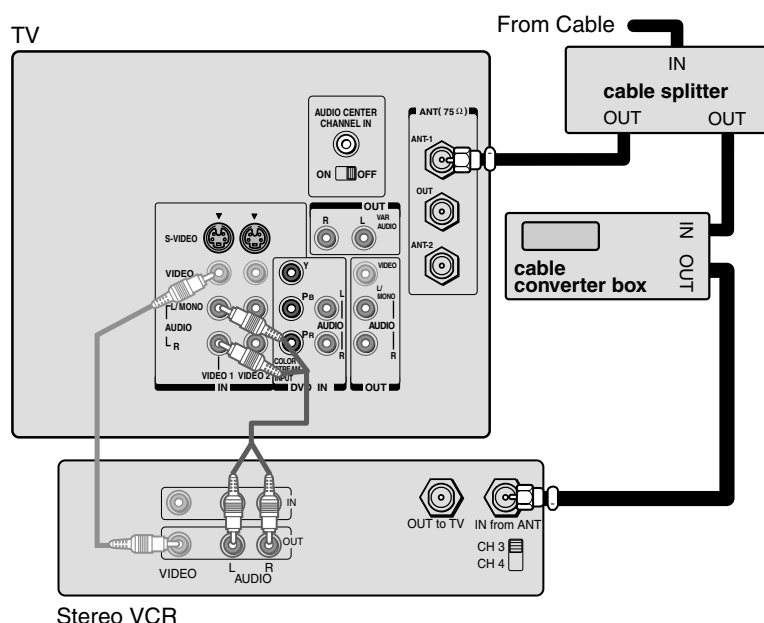
When you use a converter box with your TV, there may be features that you cannot program using the remote control, such as programming your favorite channels, labeling channels, and locking channels.

Connecting a cable converter box and a VCR

This connection allows you to watch and record basic and premium cable channels, as well as watch videotapes. To use the TV's features, select ANT-1. To view premium channels or record with the VCR, select ANT-2 and tune the TV to channel 3 or 4 (whichever is vacant in your area), and then use the converter box to change channels.

You will need:

- one cable splitter
- two coaxial cables
- one pair of audio cables (one single audio cable for a mono VCR)
- one video cable



Note:

If you have a mono VCR, connect L/Mono to VCR Audio OUT using only one audio cable.

If you have an S-VHS VCR, use an S-video cable instead of a regular video cable. Do not connect a regular video cable and an S-video cable to Video-1 (or Video-2) at the same time or the picture will be distorted.

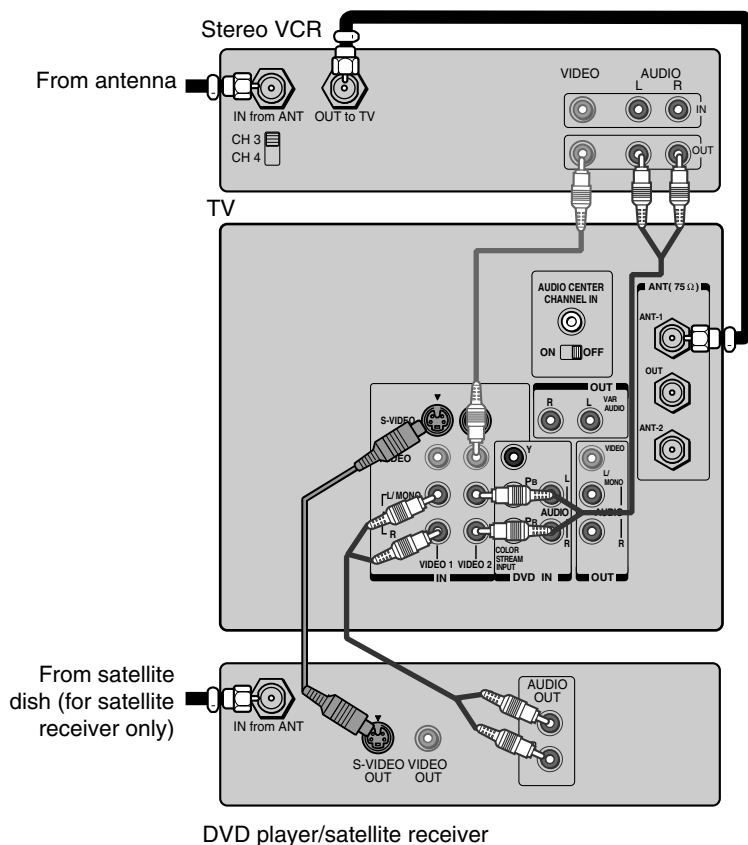
When you use a converter box with your TV, you may not be able to program some features using the remote control, such as programming your favorite channels, labeling channels, and locking channels.

Connecting a DVD player/satellite receiver and a VCR

This connection allows you to watch DVD/satellite, VCR, and TV programs. You can record one TV channel while watching another channel.

You will need:

- one coaxial cable
- two pairs of audio cables (one single and one pair of audio cables for a mono VCR)
- one video cable
- one S-video cable



Note:

You can use a regular video cable instead of an S-video cable, but the picture quality will decrease. If you use an S-video cable between the TV and DVD player/satellite receiver, make the audio connections only and remove the regular video cable.

Do not connect a regular video cable and an S-video cable to Video-1 (or Video-2) at the same time or the picture will be distorted.

The unauthorized recording of television programs, video tapes, DVDs, and other materials may infringe upon the provisions of copyright laws.

Connecting a DVD player with ColorStream® (component video) and a VCR

This connection allows you to watch DVD, VCR, or TV programs, and record DVD or TV programs. You can record from one source while watching a program from another source.

Your TV has ColorStream® (component video) connections. Connecting your TV to a DVD player with component video (such as a Toshiba DVD player with ColorStream®) can greatly enhance picture quality and performance.

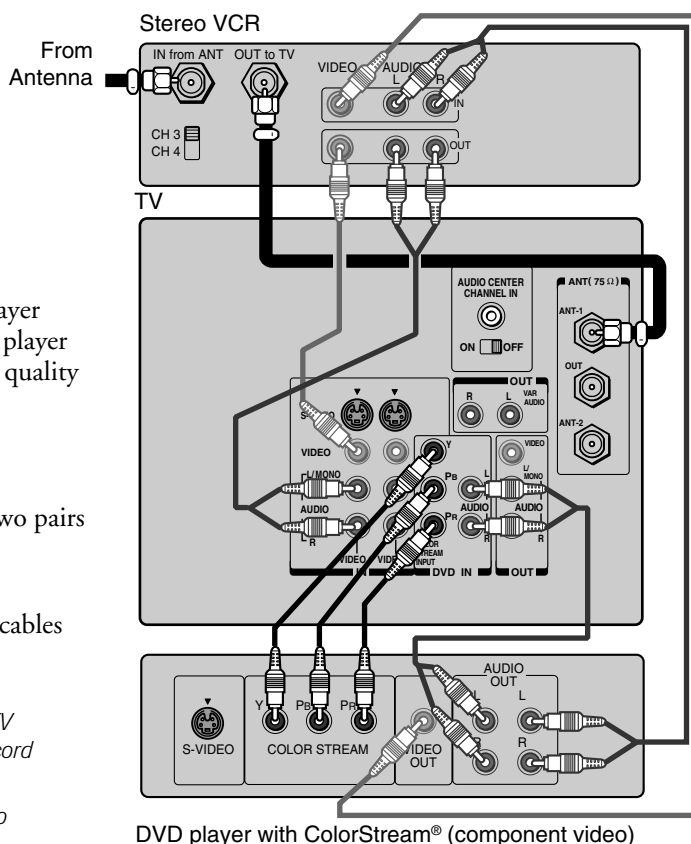
You will need:

- one coaxial cable
- three pairs of audio cables (one single and two pairs of audio cables for a mono VCR)
- two video cables
- one set of ColorStream (component video) cables

Note:

To play a DVD, the DVD player and TV must use ColorStream (component video) connections, and the TV must be set to ColorStream mode (see page 40). To record from the DVD player, the VCR must select Line IN.

The unauthorized recording of television programs, video tapes, DVDs, and other materials may infringe upon the provisions of copyright laws.



DVD player with ColorStream® (component video)

Connecting two VCRs

This connection allows you to record (dub/edit) from one VCR to another VCR while watching a video program. You will also be able to record from one TV channel while watching another channel.

You will need:

- one coaxial cable
- two pairs of audio cables (two single audio cables for mono VCRs)
- two video cables

Note:

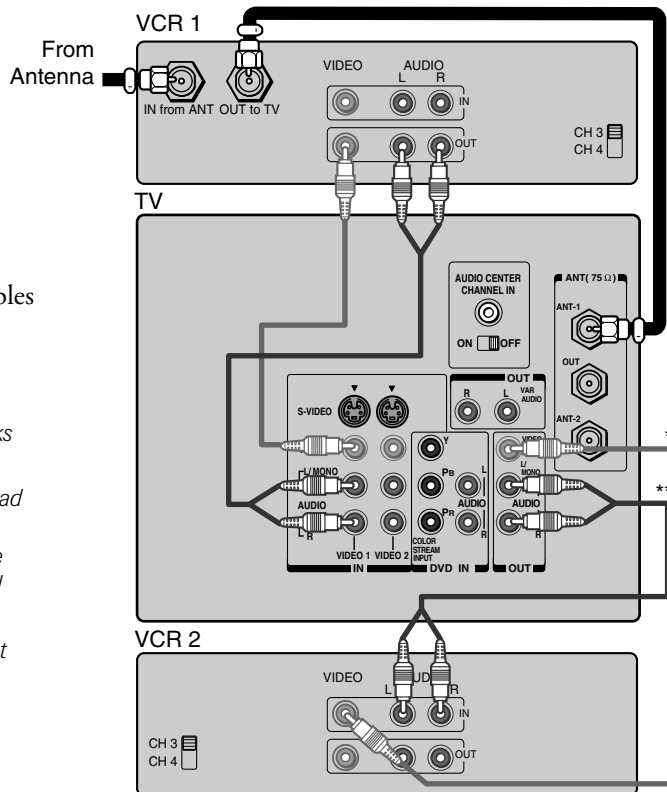
Do not connect the same VCR to the output and input jacks on the TV at the same time.

If you are using an S-VHS VCR, use an S-video cable instead of a regular video cable for better picture performance.

Do not connect a regular video cable and an S-video cable to Video-1 (or Video-2) at the same time or the picture will be distorted.

To dub or edit, VCR 2 must select Line IN, and the TV must select Video-1.

The unauthorized recording of television programs, video tapes, DVDs, and other materials may infringe upon the provisions of copyright laws.



* The Audio OUT jacks can output the sound of either the main or PIP picture (see "Selecting the Audio OUT sound" on page 47).

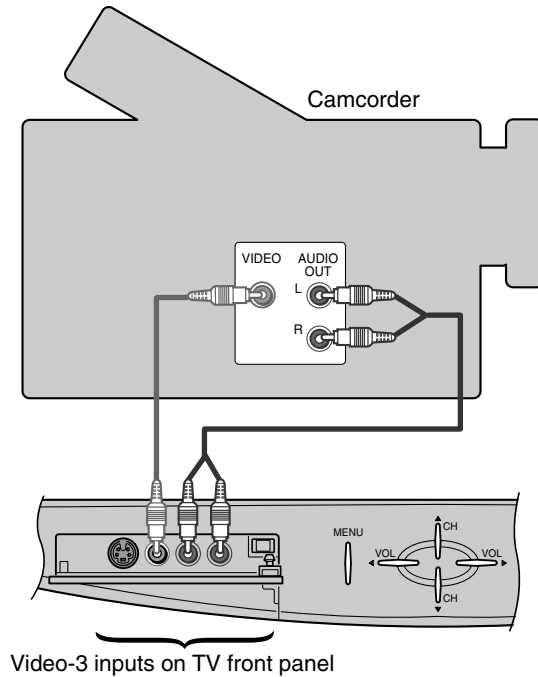
** The Video OUT jack will not output a PIP picture.

Connecting a camcorder

This connection allows you to watch video materials recorded on a camcorder.

You will need:

- one pair of audio cables
- one video cable



Note:

If you have an S-VHS camcorder, use an S-video cable instead of a regular video cable.

Do not connect a regular video cable and an S-video cable to Video-3 at the same time or the picture will be distorted.

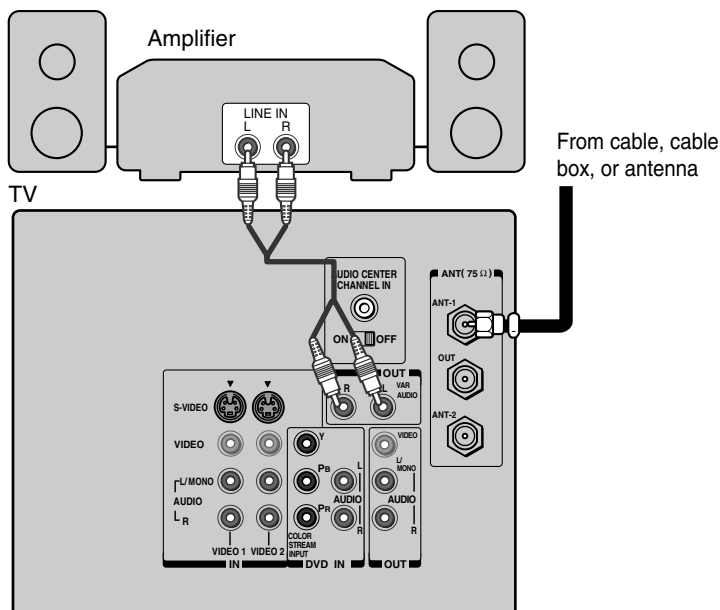
Connecting an audio system

This connection allows you to use an audio amplifier to adjust the audio level. This also allows you to use external speakers.

To control the audio, turn on the TV and the stereo amplifier, and then turn off the built-in speakers (see “Turning off the built-in speakers” on page 46).

You will need:

- one pair of audio cables



Note:

To hear sound, the volume of both the TV and the external audio amplifier must be set above 0 (zero).

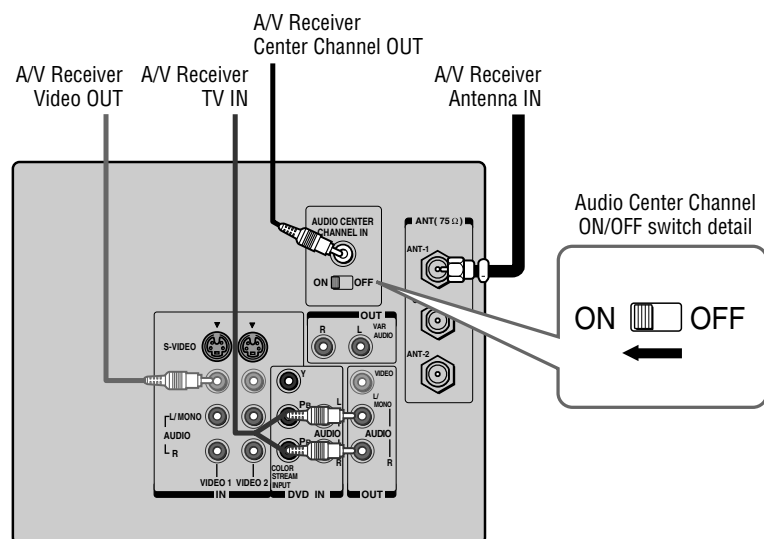
Connecting an A/V receiver

If you use a system that delivers Dolby Pro Logic* surround sound, you will probably want to use the TV speakers as center channel speakers.

A center channel speaker adds to the realism of a surround sound system such as Dolby Pro Logic.

You will need:

- one pair of audio cables
- one video cable
- one audio cable for audio center channel



Caution:

To avoid damaging the TV speakers, turn off the TV before connecting or disconnecting the Audio Center Channel cable.

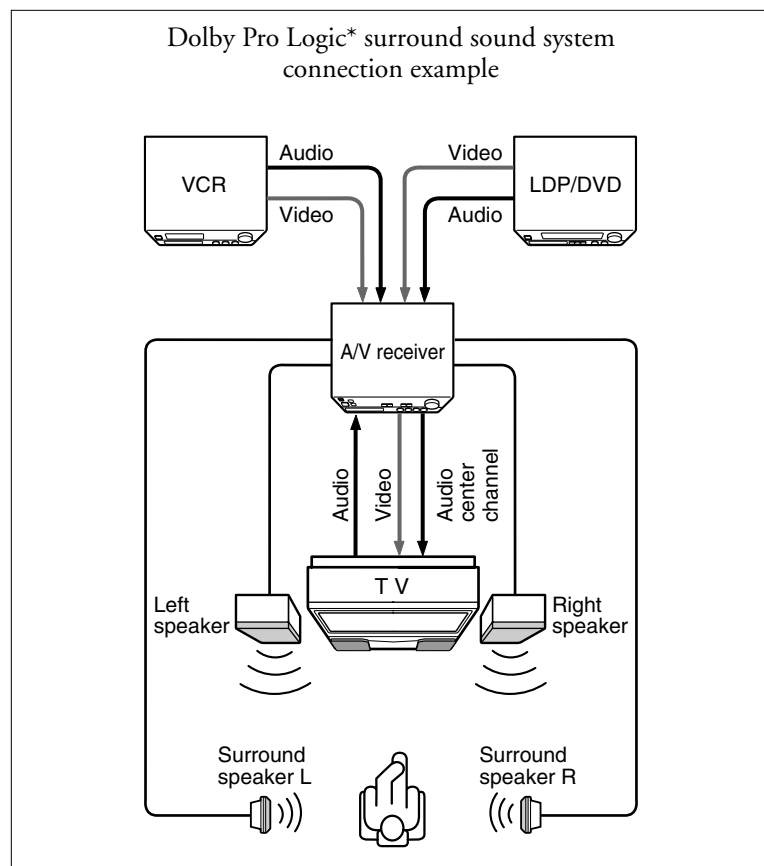
Note:

For surround sound system setup details, refer to the instructions furnished with your A/V receiver.

When the Audio Center Channel ON/OFF switch is in the ON position, the TV speakers will function only as center channel speakers.

To adjust the center channel speaker volume, use the center level control on your A/V receiver.

To use the TV speakers as normal speakers, set the Audio Center Channel ON/OFF switch to the OFF position.



* "Dolby Pro Logic" is a registered trademark of Dolby Laboratories Licensing Corporation.

Using the remote control

Preparing the remote control for use

Your Toshiba remote control has one dedicated TV mode and 5 universal modes: VCR, Cable/SAT, DVD, Audio1, and Audio2. The target devices and default devices being programmed for each mode are as follows:

Target device/Mode mapping

Mode	Device
TV	Toshiba TV
CABLE/SAT	Universal Cable, Satellite
VCR	Universal VCR, DVD, LD, Cassette
DVD	Universal DVD, VCR, LD, Cassette
AUDIO1	Universal Audio: Amp., Tuner, Misc.Audio, CD/MD
AUDIO2	Universal Audio: CD/MD, Amp., Tuner, Misc.Audio

Default device codes

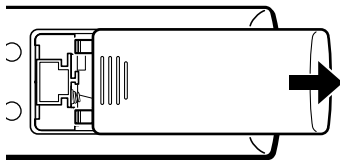
Mode	Default device
TV	Toshiba TV
CABLE/SAT	Toshiba Satellite receiver
VCR	Toshiba VCR
DVD	Toshiba DVD
AUDIO1	Pioneer Audio receiver
AUDIO2	Pioneer LD

Repeatedly press MODE to cycle among the modes. If you own different brands of audio/video devices and want to operate them using the TV remote control, you must first program the remote control (see “Programming the remote control for use with audio/video devices” on page 14).

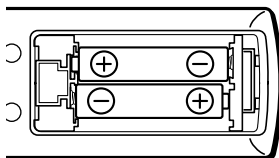
Installing the remote control batteries

To install the batteries:

1. Slide the battery cover off the back of the remote control.



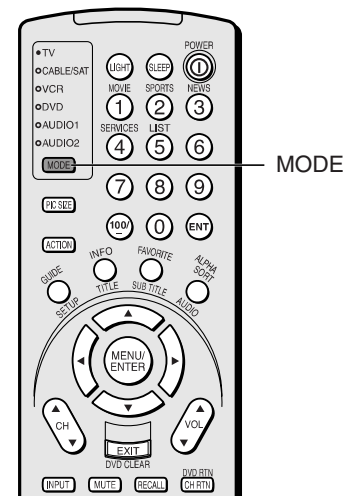
2. Install two “AA” size alkaline batteries. Match the + and - signs on the batteries to the signs on the battery compartment.



3. Slide the battery cover back on to the remote control until the lock snaps.

Note:

The remote control may not operate your audio/video devices. Refer to the owner's manuals provided with your other devices to see which features are available. In addition, the remote controls for your other devices may have features not available on the TV remote control. If you would like to continue to use these features, you may want to use the remote controls for your other devices.



Caution:

- Dispose of batteries in a designated disposal area. Do not throw batteries into a fire.
- Do not mix battery types, or combine used batteries with new ones.
- Remove dead batteries immediately to prevent battery acid from leaking into the battery compartment.
- Battery life expectancy is about one year with normal use. If you do not intend to use the remote control for a long time, remove the batteries.

Remote control functional key chart

Key Label	Toshiba TV (TV)	Cable (CBL/SAT)	Satellite (CBL/SAT)	VCR	DVD/LD	Receiver (AUDIO)	CD/MD (AUDIO)	Cassette (VCR)
LIGHT	Illuminates the remote							
SLEEP	Sleep timer	---	---	---	---	---	---	---
POWER	Power	Power	Power	Power	Power	Power	Power	Power
1/MOVIE	Digit 1	Digit 1	Digit 1	Digit 1	Digit 1	AV input 1	Digit 1	Digit 1
2/SPORTS	Digit 2	Digit 2	Digit 2	Digit 2	Digit 2	AV input 2	Digit 2	Digit 2
3/NEWS	Digit 3	Digit 3	Digit 3	Digit 3	Digit 3	AV input 3	Digit 3	Digit 3
4/SERVICES	Digit 4	Digit 4	Digit 4	Digit 4	Digit 4	AV input 4	Digit 4	Digit 4
5/LIST	Digit 5	Digit 5	Digit 5	Digit 5	Digit 5	CD	Digit 5	Digit 5
6	Digit 6	Digit 6	Digit 6	Digit 6	Digit 6	Tuner	Digit 6	Digit 6
MODE	Device mode selection for the remote control							
PIC SIZE	This button is not available for this TV model or any other device connected to this TV.							
7	Digit 7	Digit 7	Digit 7	Digit 7	Digit 7	Phono	Digit 7	Digit 7
8	Digit 8	Digit 8	Digit 8	Digit 8	Digit 8	Cassette	Digit 8	Digit 8
9	Digit 9	Digit 9	Digit 9	Digit 9	Digit 9	Aux	Digit 9	Digit 9
ACTION	---	Menu	Action, Menu	Menu	Menu	---	---	---
100/-	100	100	100	100	100	100	100	100
0	Digit 0	Digit 0	Digit 0	Digit 0	Digit 0	Digit 0	Digit 0	Digit 0
ENT	---	CH Enter	CH Enter	CH Enter	---	---	---	---
GUIDE/SETUP	---	Guide	Guide	Program	DVD setup	Program	Program	---
INFO/TITLE	TV preview	← TV	INFO	← TV	TITLE= Top menu	← TV	← TV	← TV
FAVORITE/ SUBTITLE	Favorite CH	---	Favorite CH	---	Subtitle	---	---	---
ALPHASORT/ AUDIO	---	---	Alphasort	---	Audio	---	---	---
MENU/ ENTER	Menu open/ Enter	Select	Select	Enter	Enter	---	---	---
▲▼	Menu select	Menu select	Menu select	Menu select	Menu select	---	---	---
◀▶/FAV ◀▶	Menu select/ FAV ▶	Menu select	Menu select	Menu select	Menu select	---	---	---
VOL ▲▼	Volume up/down*	Volume up/down*	Volume up/down*	Volume up/down*	Volume up/down*	Volume up/down*	Volume up/down*	---
EXIT/ DVD CLEAR	Exit	Exit	Exit	Exit	DVD clear	Exit/Clear	Exit/Clear	Exit/Clear
CH ▲▼	Channel up/down	Channel up/down	Channel up/down	Channel up/down	---	Channel up/down	---	---
INPUT	TV/Video select	← TV	← TV	VCR input	← TV	Input	← TV	← TV
MUTE	Sound mute*	Sound mute*	Sound mute*	Sound mute*	Sound mute*	Sound mute*	Sound mute*	---
RECALL	On-screen display	On-screen display	On-screen display	On-screen display	On-screen display	---	---	---
CH RTN/ DVD RTN	Previous channel	Previous channel	Previous channel	Previous channel	DVD return	---	---	---
SLOW/ DIR	▶ ---	---	---	Forward ---	Forward Reverse	---	---	---
SKIP/ SEARCH	▶ ---	---	---	---	Forward Reverse	CH forward CH reverse	Forward Reverse	Forward Reverse
REW	VCR →	VCR →	VCR →	Rewind	Rewind	Rewind	Rewind	Rewind
PAUSE/STEP	VCR →	VCR →	VCR →	Pause	Pause	Pause	Pause	Pause
PLAY	VCR →	VCR →	VCR →	Play	Play	Play	Play	Play
FF	VCR →	VCR →	VCR →	F. Forward	F. Forward	F. Forward	F. Forward	F. Forward
TV/VCR	VCR →	Bypass A/B	TV/SAT	TV/VCR	---	---	---	---

DISC AM/FM	---	---	---	---	Disc shift	AM/FM	Disc shift	Deck side A/B switch
STOP	VCR →	VCR →	VCR →	Stop	Stop	Stop	Stop	Stop
REC	VCR →	VCR →	VCR →	Record	---	Record	Record	Record
PIP CH ▲▼	PIP channel up/down	← TV	← TV	← TV	← TV	← TV	← TV	← TV
PIP	PIP on/off	← TV	← TV	← TV	← TV	← TV	← TV	← TV
MULTI	Strobe	← TV	← TV	← TV	← TV	← TV	← TV	← TV
STILL	PIP Still	← TV	← TV	← TV	← TV	← TV	← TV	← TV
SWAP	PIP Swap	← TV	← TV	← TV	← TV	← TV	← TV	← TV
LOCATE	PIP Locate	← TV	← TV	← TV	← TV	← TV	← TV	← TV
SOURCE	PIP Source	← TV	← TV	← TV	← TV	← TV	← TV	← TV

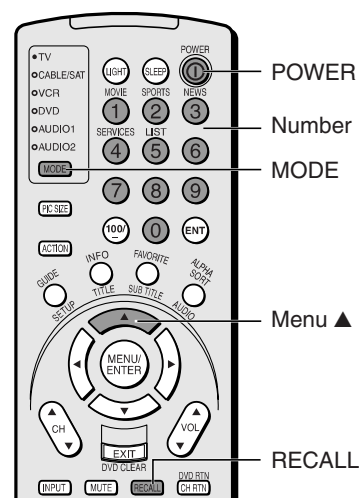
Notes:

- “---” will send nothing.
- “← TV” will jump to TV.
- “VCR →” will jump to last active VCR or DVD. Active VCR/DVD is defined as the mode that remains for a minimum of 5 seconds, or if a key is pressed in that mode.
- * The VOLUME and MUTE will jump to “TV” by default. When the volume is unlocked, all the devices will have their own volume. The AUDIO1/2 (Receiver, CD) modes will have their own volume even if Volume Lock is on TV, CABLE/SAT, VCR, or DVD. See “Using the Volume Lock feature” on page 15.

Programming the remote control for use with your audio/video devices

Device code setup

1. Refer to the Device code table on pages 16–19 to find the code for the brand of your device.
If more than one code is listed, try each one separately until you find the one that works.
2. Press MODE until the Mode indicator of the device (CABLE/SAT, VCR, DVD, AUDIO1, AUDIO2) lights up.
3. While holding down RECALL, press the Number buttons to enter the four-digit code for your device.
If the correct code is entered, the mode indicator will blink twice.
If an incorrect code is entered, there will be one long blink.
4. Point the remote control at the device and press POWER to test the code.
If the device responds to the remote control, you have entered the correct code.
If the device does not respond, you may have entered the wrong code. Repeat steps 3 and 4 using another code.
5. To control the TV, press MODE to select TV.



Note:

- Each time you replace the batteries, you must reprogram the remote control.
- Some newer VCRs are capable of working on either of two remote codes. These VCRs have a switch labeled "VCR1/VCR2."

If your VCR has this kind of switch and does not respond to any of the codes for your VCR brand, set the switch to the other position (VCR1 or VCR2) and reprogram the remote control.

Searching and sampling the code of a device (991)

If you do not know the device code for a particular device, you can cycle the remote control through the available codes for that device mode, and sample various function buttons to find the code that enables the remote control to operate the target device. The keys available to be sampled, provided they are applicable to that mode, are 0, 1, 2, 3, POWER, VOL ▲, CH ▲, PLAY, and STOP. Invalid keys will be ignored while in program mode.

To cycle through each available device code and sample its functions:

1. Press MODE to select the mode you want to set up.
 2. While holding down RECALL, press 9, 9, 1. The remote control will enter program mode.
 3. Point the remote control at the target device, and then press POWER (or other function buttons that are available to be sampled).
 4. If the device responds to the remote control:
 - Press RECALL to store the device code. The mode indicator will blink twice, and the remote control will exit program mode.
- If the device does not respond to the remote control:
- Press MENU ▲, and then press POWER. Repeat this step until the device responds to the remote control, and then press RECALL.

Note: When the search cycle is done, the mode indicator will blink three times. The remote control will begin to cycle through the available codes again. If no key is pressed within 10 seconds while programming, the remote control will exit the program mode and return to the previous code.

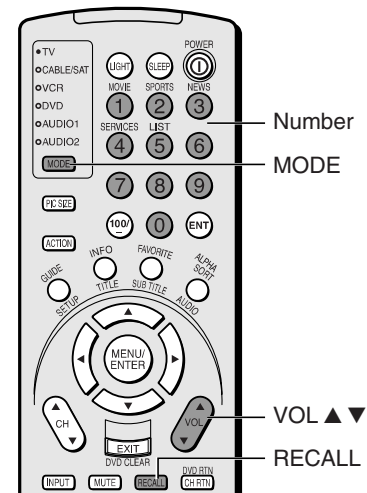
Verifying the device code (990)

Use this feature to verify the device codes currently programmed in the remote control. The number of blinks after pressing the 1, 2, 3, and 4 buttons is the 4-digit code set up for that mode.

For example, to verify the device code for the VCR mode:

1. Repeatedly press MODE until the VCR mode is selected.
2. While holding down RECALL, press 9, 9, 0.
3. Press 1 → 0 blinks.
4. Press 2 → 3 blinks.
5. Press 3 → 8 blinks.
6. Press 4 → 5 blinks.

This verifies that the device code of the VCR mode is “0385.”



Using the Volume Lock feature (993)

For the TV, CABLE/SAT, VCR, and DVD modes, the volume controls (VOL ▲▼ and MUTE) can be programmed or locked to the selected device mode. This feature does not apply to the AUDIO1 and AUDIO2 modes.

For example, to lock the volume controls to the CABLE/SAT mode:

1. Repeatedly press MODE until the CABLE/SAT mode is selected.
2. While holding down RECALL, press 9, 9, 3.
3. Press VOL ▲. When locked, the mode indicator will blink two times.

The following table describes in more detail the Volume Lock implementation.

Volume locked to:	TV	CBL/SAT	VCR	DVD	AUD1	AUD2
TV (default)	TV	TV	TV	TV	AUD1	AUD2
CBL/SAT	CBL/SAT	CBL/SAT	CBL/SAT	CBL/SAT	AUD1	AUD2
VCR	VCR	VCR	VCR	VCR	AUD1	AUD2
DVD	DVD	DVD	DVD	DVD	AUD1	AUD2
AUD1	AUD1	AUD1	AUD1	AUD1	AUD1	AUD1
AUD2	AUD2	AUD2	AUD2	AUD2	AUD2	AUD2

To reset the volume controls to the original device code:

1. While holding down RECALL, press 9, 9, 3.
2. Press VOL ▼. When unlocked, the mode indicator will blink four times.

Operational feature reset (980)

This feature clears all setup features not related to “Device code set up,” and resets the Volume Lock to “TV.”

To reset the features:

- While holding down RECALL, press 9, 8, 0.
- When reset, the mode indicator will blink two times, and then pause and blink two more times.

Device code table

Cable box setup codes

Brand name	Code number
ABC	0020, 0022, 0026, 0027, 0030, 0032, 0033, 0036
Allegro	0172, 0334
Americast	0918
Antronix	0041, 0226
Archer	0041, 0172, 0226, 0816
BBT	0286
Belcor	0075
Bell & Howell	0033
Bell South	0918
Cable Star	0075
Cabletenna	0041
Cableview	0041
Century	0172
Citizen	0172, 0334
Colour Voice	0044, 0050
Comtronics	0059
Contec	0038
Digi	0656
Eastern	0021
Emerson	0816
Everquest	0034, 0059
Focus	0419
GC Electronics	0075, 0226
Garrard	0172
Gemini	0034, 0089, 0816
General Instrument	0030, 0295, 0495, 0829
GoldStar	0059, 0163
Goodmind	0816
Hamlin	0028, 0039, 0053, 0278, 0292
Hitachi	0030
Hytex	0026
Jasco	0034, 0172, 0334
Jerrold	0022, 0030, 0031, 0033, 0034, 0043, 0295, 0495, 0829
Linsay	0459
Magnavox	0046
Memorex	0019
Movie Time	0082, 0175
NSC	0082, 0089, 0175
Novaplex	0637
Oak	0026, 0038
Optimus	0040
Panasonic	0019, 0040, 0126
Panther	0656
Paragon	0019
Philips	0044, 0046, 0050, 0172
Pioneer	0042, 0163, 0552, 0896
Popular Mechanics	0419
Prelude	0789
Pulsar	0019
Quasar	0019
RCA	0040
Radio Shack	0034, 0334, 0816, 0902
Realistic	0226
Recoton	0419
Regal	0039, 0278, 0292
Regency	0021
Rembrandt	0030, 0089
Runco	0019

SL Marx	0059
Samsung	0059, 0163
Scientific Atlanta	0027, 0036, 0496, 0896
Seam	0529
Signal	0034, 0059
Signature	0030
Sprucer	0040
StarSight	0441, 0561
Starcom	0022, 0034
Stargate	0034, 0059, 0789, 0816
Starquest	0034
Sylvania	0020
TFC	0329
TV86	0082
Tandy	0277
TeleCaption	0240
Televue	0059
Texscan	0020
Timeless	0437
Tocom	0031, 0032
Toshiba	0019
Tusa	0034
Unika	0041, 0172, 0226
United Artists	0026
Universal	0041, 0075, 0172, 0210, 0226
Viewstar	0046, 0082, 0277
Zenith	0019, 0073, 0544, 0918
Zentek	0419

Satellite Receiver setup codes

Brand name	Code number
AlphaStar	0791
Chaparral	0072, 0235
Curtis Mathes	0080
Echostar	0288, 0299, 0794, 1024
Expressvu	0794
General Instrument	0380, 0646, 0888
HTS	0794
Hitachi	0838
Homecable	0257
Hughes Network	
Systems	0768
IQ	0229
IQ Prism	0229
JVC	0794
Jerrold	0380, 0646
Legend	0288
Macom	0080
Magnavox	0741, 0743
Memorex	0288, 0743
Next Level	0888
Panasonic	0720
Philips	0741, 0743
Primestar	0380, 0646
RCA	0162, 0411, 0585, 0874
Radio Shack	0888
Realistic	0071
STS	0229
Sony	0658
Star Choice	0888
Toshiba	0080, 0101, 0768, 0809, 1071, 1072, 1073
Uniden	0071, 0093, 0257, 0741, 0743
Zenith	0080, 0875

Device code table

VCR setup codes

Brand name	Code number				
Admiral	0067, 0228	Kenwood	0057, 0060, 0086,	Radix	0056
Adventura	0019		0403	Randex	0056
Aiko	0297	Kodak	0054, 0056	Realistic	0019, 0054, 0056,
Aiwa	0019, 0056, 0326	LXI	0056		0065, 0066, 0067,
Akai	0060, 0072, 0080,	Lloyd's	0019, 0227		0081, 0085, 0123
	0125	Logik	0091	ReplayTV	0633, 0635
America Action	0297	MEI	0054	Ricoh	0053, 0272
American High	0054	MGA	0062, 0080, 0259	Runco	0058
Asha	0259	MGN Technology	0259	STS	0061
Audiovox	0056	MTC	0019, 0259	Samsung	0064, 0070, 0072,
Beaumarck	0259	Magnasonic	0297		0259
Bell & Howell	0123	Magnavox	0019, 0054, 0058,	Sanky	0058, 0067
Broksonic	0021, 0140, 0203,		0100, 0129, 0168	Sansui	0019, 0060, 0086,
	0228, 0314, 0380,	Magnin	0259		0228, 0290, 0498
	0498	Marantz	0054, 0100	Sanyo	0065, 0066, 0123,
CCE	0091, 0297	Marta	0056		0259
Calix	0056	Matsushita	0054, 0181, 0473	Scott	0062, 0064, 0140,
Canon	0054	Memorex	0019, 0054, 0056,		0203, 0229, 0231
Capehart	0039		0058, 0065, 0066,	Sears	0019, 0054, 0056,
Carver	0100		0067, 0123, 0181,		0061, 0065, 0066,
Cineral	0297		0228, 0259, 0326,		0073, 0076, 0085,
Citizen	0056, 0297		0473, 1056, 1181,		0123, 0124
Colt	0091		1281	Semp	0064
Craig	0056, 0066, 0091,	Minolta	0061, 0124	Sharp	0067, 0081
	0259, 0290	Mitsubishi	0062, 0067, 0080,	Shintom	0091
			0086	Shogun	0070, 0259
Curtis Mathes	0054, 0060, 0079,			Singer	0091
	0181	Motorola	0054, 0067	Sony	0019, 0051, 0052,
Cybernex	0070, 0259	Multitech	0019, 0091		0053, 0054, 0272,
Daewoo	0039, 0064, 0297,	NAD	0077		1051
	0580	NEC	0057, 0059, 0060,	Sunpak	0272
Daytron	0039		0086, 0123	Sylvania	0019, 0054, 0062,
Denon	0061	Nikko	0056		0100, 0129
Dynatech	0019	Nikon	0053, 0272	Symphonic	0019
Electrohome	0056	Noblex	0259	TMK	0055, 0227, 0259
Electrophonic	0056	Olympus	0054	Tatung	0060
Emerex	0051	Optimus	0056, 0067, 0077,	Teac	0019, 0060
Emerson	0019, 0021, 0055,		0123, 0181, 0451,	Technics	0054, 0181
	0056, 0062, 0080,		0473, 1067, 1081,	Teknika	0019, 0054, 0056
	0087, 0107, 0140,		1181, 1281	Thomas	0019
	0203, 0227, 0228,	Optonica	0081	Tivo	0637
	0231, 0297, 0313,	Orion	0021, 0203, 0228,	Toshiba	0062, 0064, 0076,
	0314, 0380, 0498,		0314, 0498		0085, 0229, 0231,
	0580	Panasonic	0054, 0096, 0181,		0385
Fisher	0066, 0073, 0085,		0244, 0473, 0635,	Totevision	0056, 0259
	0123		1081, 1181, 1281	Unitech	0259
Fuji	0052, 0054	Penney	0054, 0056, 0057,	Vector	0064
Funai	0019		0059, 0061, 0073,	Vector Research	0057, 0059
GE	0054, 0067, 0079,		0259	Video Concepts	0059, 0064, 0080
	0221, 0259	Pentax	0061, 0124	Videosonic	0259
Garrard	0019	Philco	0054, 0228, 0498	Wards	0019, 0054, 0061,
Go Video	0451, 0545, 0662	Philips	0054, 0081, 0100,		0066, 0067, 0079,
GoldStar	0056, 0057		0129, 0637, 1100,		0081, 0091, 0100,
Gradiente	0019, 0027		1200		0168, 0231, 0259
HI-Q	0066	Pilot	0056	White Westinghouse	0228, 0297
Harley Davidson	0019	Pioneer	0077, 0086	XR-1000	0019, 0054, 0091
Harman/Kardon	0057, 0100	Portland	0039	Yamaha	0057
Harwood	0087, 0091	Profitronic	0259	Zenith	0019, 0052, 0053,
Headquarter	0065	Proscan	0079, 0221		0058, 0228, 0498,
Hitachi	0019, 0060, 0061,	Protec	0091		0656
	0124	Pulsar	0058, 0070		
Hughes Network		Quarter	0065		
Systems	0061	Quartz	0065		
JVC	0027, 0060, 0086,	Quasar	0054, 0096, 0181,		
	0403		0473, 1181		
Jensen	0060	RCA	0054, 0061, 0067,		
KEC	0056, 0297		0079, 0096, 0124,		
KLH	0091		0125, 0168, 0221,		
			0259		
		Radio Shack	0019, 1056		

Device code table

DVD setup codes

Brand name	Code number
Aiwa	0660
Denon	0509, 0653
GE	0541
Harman/Kardon	0601
JVC	0577, 0642
Kenwood	0553
Magnavox	0522
Marantz	0558
Mitsubishi	0540
Onkyo	0522, 0646
Optimus	0590
Panasonic	0509, 0651
Philips	0522, 0558
Pioneer	0544, 0590, 0651
Proscan	0541
RCA	0541
Samsung	0592
Sharp	0649
Sherwood	0652
Sony	0552
Technics	0509
Theta Digital	0590
Toshiba	0522
Yamaha	0509, 0564
Zenith	0522, 0610

Laser Disc setup codes

Brand name	Code number
Aiwa	0222
Carver	0083, 0213, 0342
Denon	0078, 0191
Disco Vision	0042
Funai	0222
Harman/Kardon	0213
Hitachi	0042
Magnavox	0213, 0236
Marantz	0083, 0213
Mitsubishi	0078
NAD	0078
Optimus	0078
Panasonic	0223
Philips	0083, 0213
Pioneer	0042, 0078
Quasar	0223
Realistic	0222
Samsung	0342
Sega	0042
Sony	0212, 0220
Technics	0223
Theta Digital	0213
Yamaha	0236

CD Player setup codes

Brand name	Code number
ADC	0037
Adcom	0174, 0253
Aiwa	0143, 0176
Akai	0175
Audio Alchemy	0213
Audio-Technica	0189
BSR	0213, 0264
Burmester	0439
California Audio Labs	0048, 0322
Carrera	0213
Carver	0176, 0198, 0318, 0456
DAK	0264
DKK	0019
Denon	0022, 0892
Emerson	0174, 0183, 0324, 0488
Fisher	0107, 0193, 0198, 0361
GE	0028
Garrard	0264, 0299, 0412, 0439
Genexxa	0051, 0183, 0324
Harman/Kardon	0176, 0192, 0445
Hitachi	0051, 0174
JVC	0091
Kenwood	0047, 0056, 0209, 0645, 0700, 0845
Kodak	0306
Krell	0176
Kyocera	0037
LXI	0324
Linn	0176
Luxman	0112
MCS	0048
MTC	0439
Magnavox	0176, 0324
Marantz	0048, 0176, 0199
McIntosh	0306
Mission	0176
NAD	0038, 0318
NEC	0253
NSM	0176
Nikko	0183, 0189, 0193
Onkyo	0120, 0887
Optimus	0019, 0051, 0056, 0106, 0164, 0198, 0213, 0215, 0299, 0324, 0361, 0439, 0445, 0456, 0487, 1082
Panasonic	0048, 0322, 0386, 0771
Parasound	0213, 0439
Philips	0176, 0306, 0645
Pioneer	0051, 0263, 0324, 0487, 1082
Proton	0176
QED	0176
Quasar	0048
RCA	0028, 0072, 0174, 0198, 0324, 0783
Realistic	0174, 0183, 0198, 0199, 0439
Rotel	0176, 0439
SAE	0176
STS	0037
Sansui	0176, 0221, 0324
Sanyo	0106, 0198
Scott	0174, 0183, 0324
Sears	0324
Sharp	0056, 0199, 0880
Sherwood	0199, 0215, 0445, 1086
Sony	0019, 0204, 0509, 0623, 0624
Soundesign	0164
Tascam	0439
Teac	0193, 0199, 0412, 0439
Technics	0048, 0322
Toshiba	0038, 0318
Vector Research	0213
Victor	0091
Wards	0072, 0176
Yamaha	0055, 0189, 0206
Yorx	0480

Device code table

Amplifier setup codes

Brand name	Code number
Aiwa	0425
Carver	0288
Curtis Mathes	0319
Denon	0179
GE	0097
Harman/Kardon	0911
JVC	0350
Linn	0288
Magnavox	0288
Marantz	0288
Optimus	0319, 0414
Panasonic	0327
Philips	0288, 0911
Pioneer	0032, 0319
Realistic	0414
Sony	0239, 0708
Soundesign	0097
Technics	0327
Toshiba	0372
Victor	0350
Wards	0032, 0097
Yamaha	0373

Cassette Player setup codes

Brand name	Code number
Aiwa	0048, 0216, 0219
Akai	0302
Carver	0048
Denon	0095
Fisher	0093
Garrard	0327, 0458
Harman/Kardon	0048, 0201
JVC	0263, 0292
Kenwood	0089
Magnavox	0048
Marantz	0028, 0048
Mitsubishi	0302
Onkyo	0154, 0155, 0301
Optimus	0046, 0239, 0356, 0458
Panasonic	0248
Philips	0048
Pioneer	0046, 0118, 0239
Revox	0209
Sansui	0028, 0048
Sherwood	0356
Sony	0189, 0262, 0310
Teac	0327
Technics	0248
Toshiba	0360, 0361
Victor	0292
Wards	0046
Yamaha	0113, 0116

Misc. Audio setup codes

Brand name	Code number
Aiwa	0029, 0178, 0423
Fisher	0071
Harman/Kardon	0496
JBL	0496
JVC	0092
Jerrold	0478, 0539
Nikko	0395
Paramount Pictures	0336
RCA	0075
SSI	0336
Schneider	0395
Scientific Atlanta	0479
Sony	0029, 0178, 0595
Soundesign	0395
Starcom	0478
Yorx	0395

Receiver setup codes

Brand name	Code number
ADC	0550
Adcom	0635
Aiwa	0140, 0177, 0208, 0424, 1108, 1424
Akai	0095, 0243
Capetronic	0550
Carver	0027, 0061, 0208, 0379, 1108, 1208
Casio	0214
Clarinet	0214
Curtis Mathes	0099
Denon	0023, 0292, 0790, 1123, 1179
Emerson	0443
Fisher	0061, 0238, 0379
Garrard	0443, 0482
Harman/Kardon	0129, 0208, 0910
Inkel	0081
JBL	0129
JVC	0093
Kenwood	0046, 0061, 0096, 0205, 0332, 0333, 1046, 1071, 1332, 1588
Koss	0443
LXI	0200
Linn	0208
Lloyd's	0214
MCS	0058, 0365
Magnavox	0147, 0208, 0214, 0410, 0550, 1108, 1208
Marantz	0058, 0147, 0208, 1108, 1208
Modulaire	0214
NAD	0339
NEC	0254
Nakamichi	0116, 0366
Onkyo	0119, 0154, 0399
Optimus	0061, 0099, 0196, 0200, 0205, 0238, 0550, 0689, 0757, 0820, 1042
Panasonic	0058, 0328, 0537, 1537
Penney	0214
Philips	0208, 0410, 1108, 1208

Pioneer	0033, 0099, 0169, 0550, 0649, 1042
Proscan	1273
Quasar	0058
RCA	0073, 0365, 0379, 0549, 0550, 1173, 1273
Realistic	0182, 0200, 0214
Sansui	0208, 0212, 0365, 1108
Sanyo	0238, 0820
Scott	0182, 0341
Sharp	0205
Sherwood	0081, 0510, 0521
Sony	0177, 0187, 0493, 1061, 1077, 1177, 1277
Soundesign	0689
Sunfire	0332, 0333, 1071, 1332
Teac	0182, 0482
Technics	0058, 0227, 0328, 0537, 1327, 1328, 1537
Thorens	1208
Victor	0093
Wards	0033, 0073, 0099, 0177, 0208
Yamaha	0195, 0205, 1195
Yorx	0214
Zenith	0876

Learning about the remote control

Only the buttons used to operate the TV are described here.

POWER turns the TV on and off

SLEEP programs the TV to turn off at a specific time (page 42)

LIGHT Pressing the LIGHT button toggles the illumination mode on and off. With the illumination mode on, the keypad will light up for 5 seconds when any key is pressed. (If in programming mode, the keypad will remain lit for 10 seconds).

Channel Numbers (0-9, 100) allow direct access to channels, even those not programmed into the TV's memory (page 24)

MODE cycles through the six device modes (TV, CABLE/SAT, VCR, DVD, AUDIO1, and AUDIO2). The mode indicator light will remain lit for 10 seconds.

FAVORITE accesses the multi-window favorite channel scan function (page 31)

INFO accesses the multi-window channel preview function (page 31)

MENU/ENTER accesses the on-screen menu system and sets menu information (page 21)

▲▼◀▶ Buttons select or adjust menu items when a menu is on-screen (page 21)

◀▶ Buttons cycle through only the channels you program as favorite channels. These buttons function as favorite channel buttons (FAV ◀▶) only when no menu is on-screen. (page 26)

VOL ▲▼ adjusts the volume level

EXIT closes any open on-screen menu (page 21)

CH ▲▼ cycles through only the channels you program into the TV's memory) (page 24)

CH RTN returns to the last viewed channel (page 26)

RECALL displays TV status information on-screen (page 48)

MUTE dims (1/2 mutes) or turns off (mutes) the sound (page 43)

INPUT selects the video input source (page 40)

PIP Buttons access PIP functions (page 29)

PIP turns the PIP feature on and off

PIP CH ▲▼ changes the PIP channel

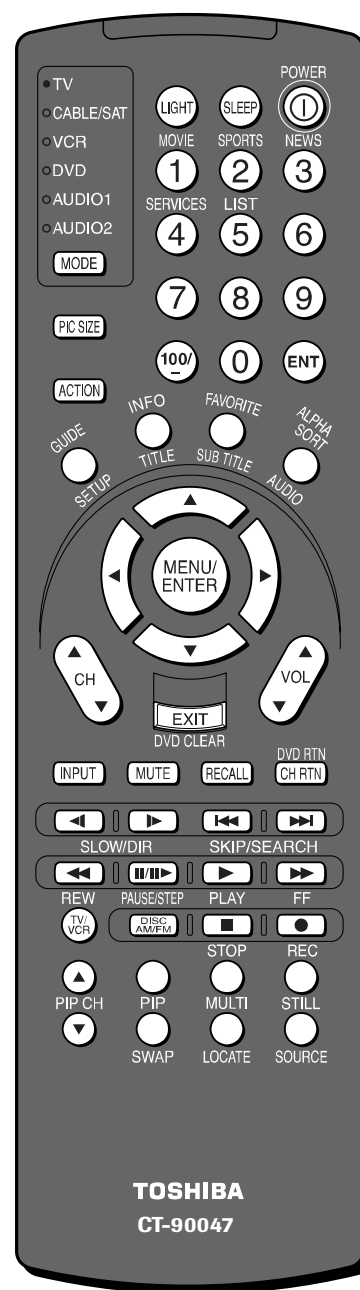
MULTI accesses the multi-window strobe function

STILL freezes the PIP picture

SOURCE selects the PIP source

LOCATE moves the PIP window

SWAP swaps the main and PIP pictures

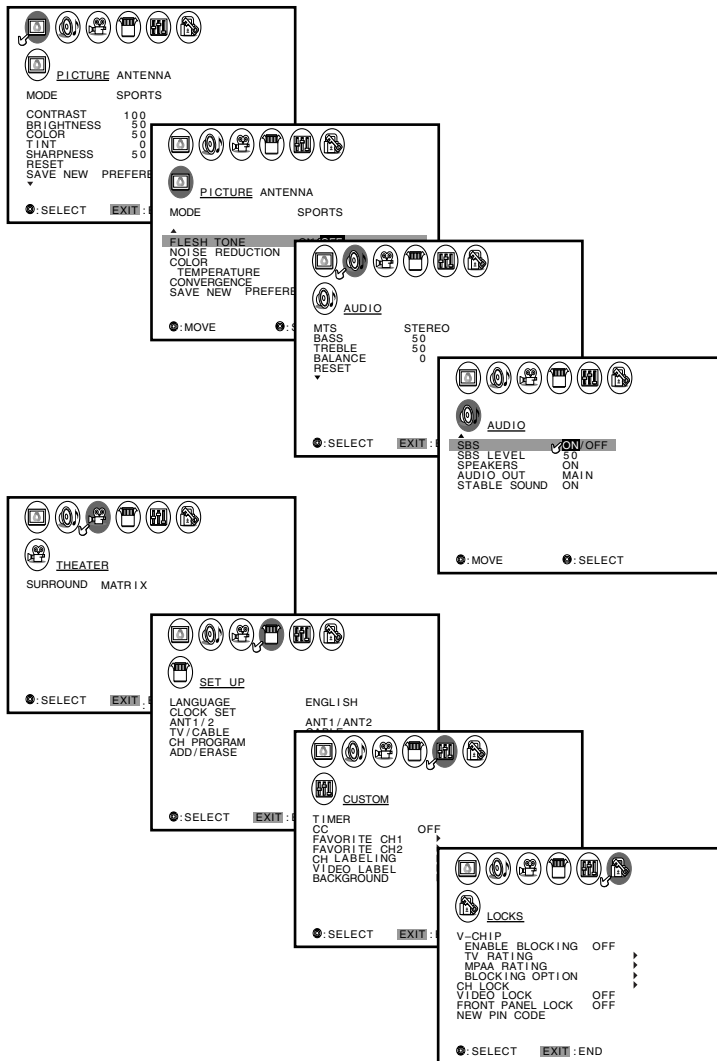


Setting up your TV

Learning about the menu system

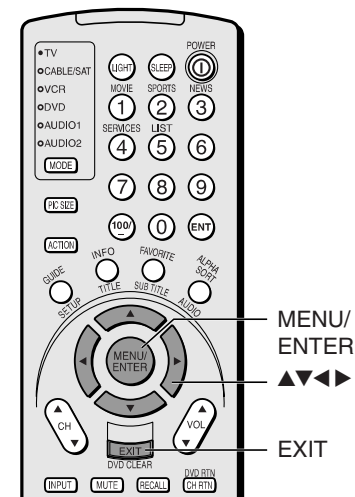
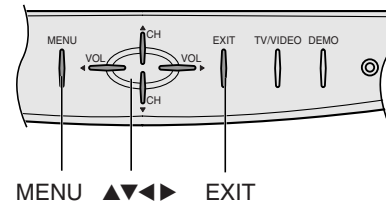
After you have installed the batteries and programmed the remote control, you will need to set some preferences on the TV using the menu system. You can access the menus using the buttons on the TV or remote control.

1. Press MENU to display the menu system.
2. Press ◀ or ▶ to select a menu.
3. Press ▲ or ▼ to select an item.
4. Press ◀ or ▶ to select or adjust a setting.



- Press ENTER to activate the function settings in the SET UP menu.
- Main menus close automatically if no selection is made within 15 seconds; sub-menus close automatically within 6 seconds (except the Convergence menu, which remains open until a button is pressed).
- Press EXIT to close an on-screen menu instantly.

TV front panel



Note:

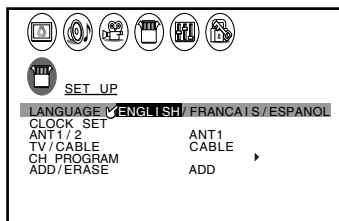
You can change the background of the menus. See page 48 for details.

Changing the on-screen display language

You can choose from three different languages (English, French and Spanish) for the on-screen displays. Adjustment menus and messages will appear in the language of your choice.

To select an on-screen display language:

1. Press MENU, and then press ◀ or ▶ until the SET UP menu appears.
2. Press ▲ or ▼ to highlight LANGUAGE.



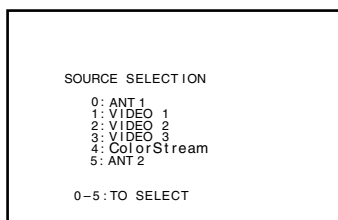
3. Press ◀ or ▶ to highlight your desired language.

Selecting the antenna input

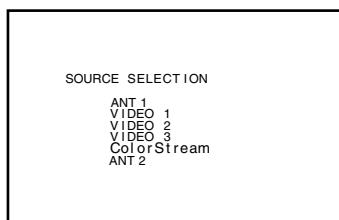
You can monitor or change the signal source that is connected to the TV (ANT 1, VIDEO 1, VIDEO 2, VIDEO 3, ColorStream, or ANT 2). The current signal source will display in purple.

To select the antenna input:

1. Press the INPUT button on the remote control (see below left) or the TV/VIDEO button on the TV front panel (see below right) to select either ANT 1 or ANT 2.



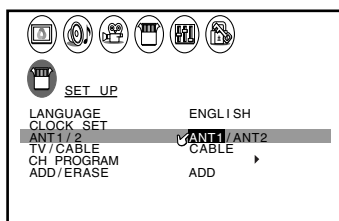
Pressing INPUT on the remote control displays this screen. To select, press 0–5.



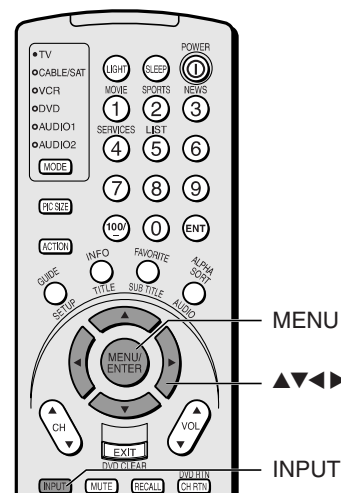
Pressing TV/VIDEO on the TV displays this screen. To select, press TV/VIDEO.

To use the menu system to select the antenna input:

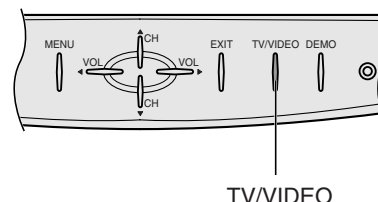
1. Press MENU, and then press ◀ or ▶ to highlight the SET UP menu.
2. Press ▲ or ▼ to highlight ANT 1/2.



3. Press ◀ or ▶ to highlight either ANT 1 or ANT 2.



TV front panel



Adding channels to the TV's memory

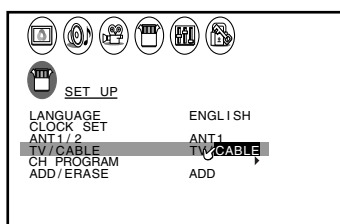
When you press Channel ▲▼, the TV will cycle through only the channels stored in the TV's channel memory. Use the steps below and on the next page to program channels into the TV's memory.

Programming channels automatically

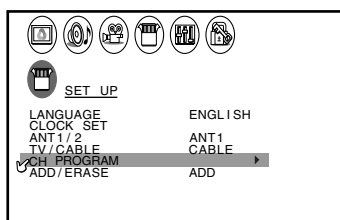
The TV can automatically detect all active channels in your area and store them in its memory. After the TV has automatically stored all active channels, you can manually add or erase individual channels. If you use both ANT-1 and ANT-2 terminals, you must program channels for each input source.

To automatically program channels into the TV's memory:

1. Press MENU, and then press ◀ or ▶ until the SET UP menu appears.
2. Press ▲ or ▼ until TV/CABLE is highlighted.
3. Press ◀ or ▶ to highlight TV (if you use an antenna) or CABLE (if you use cable).



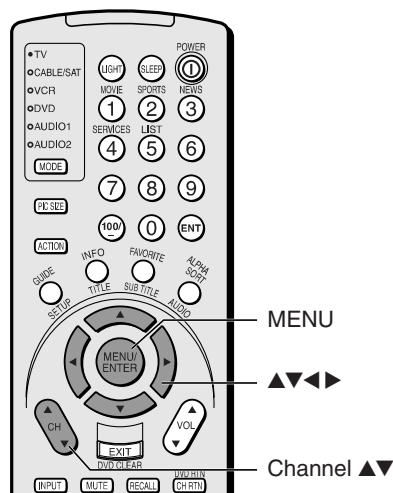
4. Press ▲ or ▼ to select CH PROGRAM.



5. Press ◀ or ▶ to start automatic channel programming. The TV automatically cycles through all of the channels (either TV or cable, depending on which you selected), and stores all active channels in its memory.

While the TV is cycling through the channels, the message "Programming Now—Please Wait" appears.

6. When channel programming is complete, the message "Completed" appears.
7. Press Channel ▲▼ to view the programmed channels.

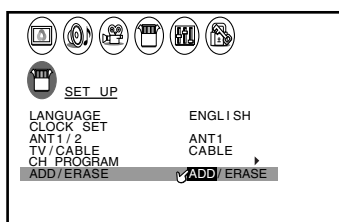


Adding and erasing channels manually

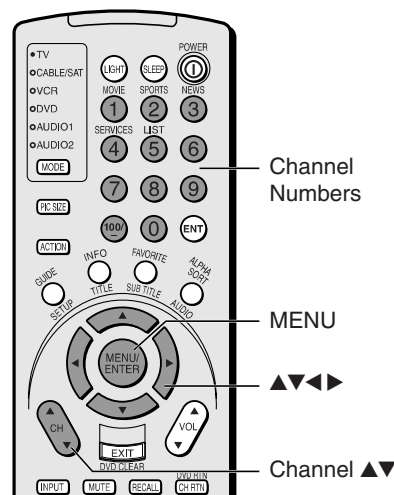
After you have automatically programmed channels into the TV's memory (see page 23), you can manually add or erase individual channels.

To manually add or erase channels:

1. Select the channel you want to add or erase. If you are adding a channel, you must use the Channel Number buttons to select the channel.
2. Press **MENU**, and then press ◀ or ▶ until the **SET UP** menu appears.
3. Press ▲ or ▼ to highlight **ADD/ERASE**.



4. Press ◀ or ▶ to select **ADD** or **ERASE**, whichever function you want to perform.
5. Repeat steps 1–4 for other channels you want to add or erase.



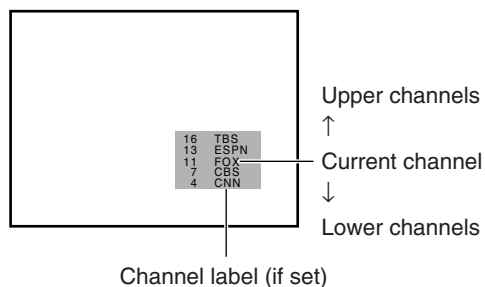
Changing channels

To change to the next programmed channel:

Press **Channel ▲▼** on the TV or remote control.

To change to a specific programmed channel:

Press and hold **Channel ▲▼** for about one second. The TV will enter the channel surf mode.



Repeatedly press or hold **Channel ▲** or **▼** while the channel surf mode is on-screen to scroll the channel list. Release the button to display the highlighted channel.

To change to a specific channel (programmed or unprogrammed):

Press the **Channel Number** buttons (0–9 and 100).

For channels 100 and higher, press the 100 button, and then the next two numbers. For example, to select channel 125, press 100, 2, 5.

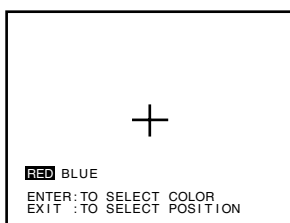
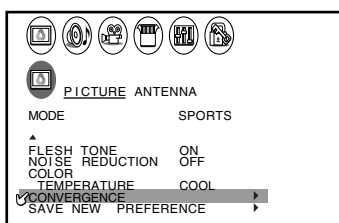
Adjusting the color convergence

This projection TV uses three separate TV tubes: red, green, and blue. The red, green, and blue images are projected onto the screen where they converge to form a full-color picture. You can see a clear picture only when the three images converge correctly. Convergence may drift over time or if you move the TV. (If the image on your screen is clear, skip this procedure.)

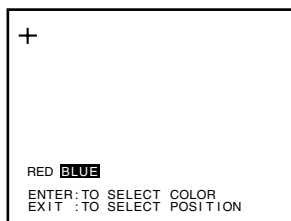
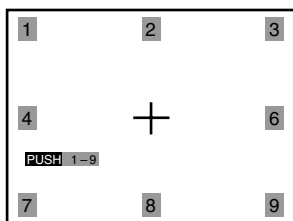
To adjust the color convergence:

Note: The TV must be on for at least 30 minutes before adjusting the color convergence.

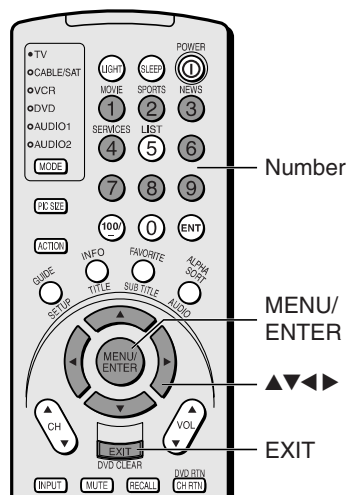
1. Press MENU, and then press ◀ or ▶ until the PICTURE menu appears.
2. Press ▲ or ▼ to highlight CONVERGENCE (below left).
3. Press ◀ or ▶ to display the center CONVERGENCE menu (below right). If you see separate red, blue, or green crossed lines, you should adjust the convergence.



4. Press ENTER to highlight RED or BLUE, depending on which color needs adjusting. If both red and blue need adjusting, you must perform steps 4 and 5 twice.
5. Press ▲ (up), ▼ (down), ◀ (left), or ▶ (right) on the remote control to converge the red or blue line into the green line. When correctly adjusted, you will see two single crossed white lines.
6. Press EXIT to display the circumference CONVERGENCE menu.
7. Press the corresponding Number button (1–4 and 6–9) to select the area you want to adjust (below left).
8. Press ENTER to highlight RED or BLUE, depending on which color needs adjusting (below right). If both red and blue need adjusting, you must perform steps 8 and 9 twice.



9. Press ▲▼◀▶ to converge the red or blue line into the green line, until you see two single crossed white lines.
10. To select another area to adjust, press EXIT once, and then repeat steps 7 through 9.
11. To close the CONVERGENCE menu, press EXIT twice.



Using the TV's features

Adjusting the channel settings

Switching between two channels

You can switch between two channels without entering an actual channel number each time.

To switch between two channels:

1. Select the first channel you want to view.
2. Select a second channel using the Channel Number buttons (0–9 and 100).
3. Press CH RTN. The previous channel will be displayed.

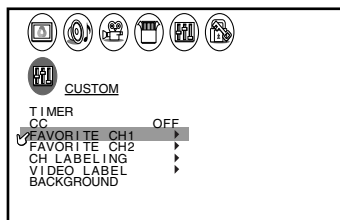
Each time you press CH RTN, the TV will switch back and forth between the two channels.

Programming your favorite channels

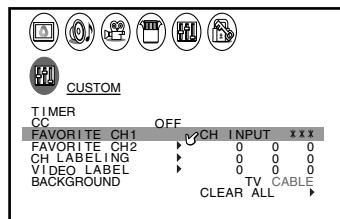
You can use the favorite channel programming feature to preset up to 18 of your favorite channels (nine in FAVORITE CH1 and nine in FAVORITE CH2). Because this feature scans through only your favorite channels, it allows you to skip other channels you do not normally watch.

To program your favorite channels:

1. Press MENU, and then press ◀ or ▶ until the CUSTOM menu appears.
2. Press ▲ or ▼ to highlight FAVORITE CH1 (or FAVORITE CH2).



3. Press ◀ or ▶ to display the FAVORITE CH1 (or FAVORITE CH2) menu. CH INPUT will be highlighted.



4. Press the Channel Number buttons to enter one of your favorite channels.

Note: For channels 100 and higher, you must use the 100 button.

5. Press ENTER.
6. Repeat steps 4 and 5 for other channels you want to program as favorite channels.

To select your favorite channels:

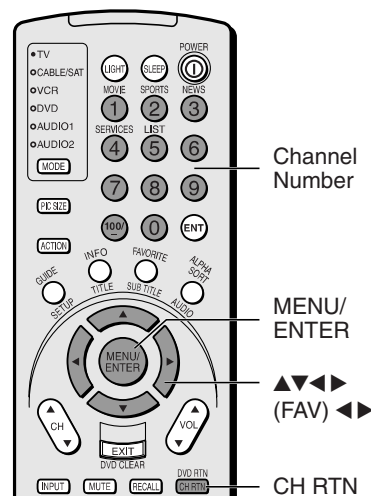
Press (FAV) ◀ or ▶.

Note: If you press (FAV) ◀ or ▶ when no channels are programmed as favorite channels, the current channel will not change.

To scan your favorite channels in a 9-picture multi-window:

Press FAVORITE (see “Using the favorite function” on page 31).

Note: If you press FAVORITE when no channels are programmed as favorite channels, the message “Not Available” will display on-screen.

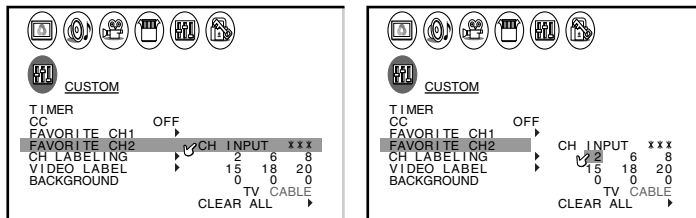


Note:

- The (FAV) ◀ ▶ buttons function as menu ◀ ▶ buttons when a menu is on-screen.
- The favorite channel feature is not available for the ANT2 input.

To clear a favorite channel:

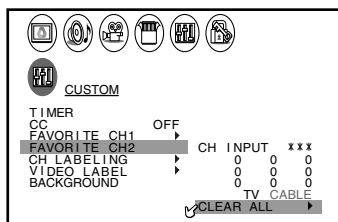
1. Press MENU, and then press ◀ or ▶ until the CUSTOM menu appears.
2. Press ▲ or ▼ to highlight FAVORITE CH2, for example.
3. Press ◀ or ▶ to display the FAVORITE CH2 menu. CH INPUT will be highlighted.
4. Press ▲▼◀▶ to highlight the channel you want to clear, and then press ENTER.



5. Repeat step 4 for other channels you want to clear.

To clear all favorite channels at once:

Press ▲ or ▼ to highlight CLEAR ALL in step 4 above, and then press ▶ or ◀. All listed channel numbers will change to "0."

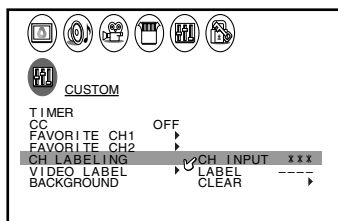


Labeling channels

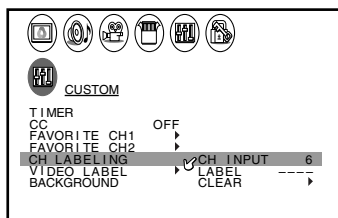
Channel labels appear above the on-screen channel number display each time you turn on the TV, select a channel, or press RECALL. You can choose any four characters for a channel label.

To create a channel label:

1. Press MENU, and then press ◀ or ▶ until the CUSTOM menu appears.
2. Press ▲ or ▼ to highlight CH LABELING.
3. Press ◀ or ▶ to display the CH LABELING menu. CH INPUT will be highlighted.

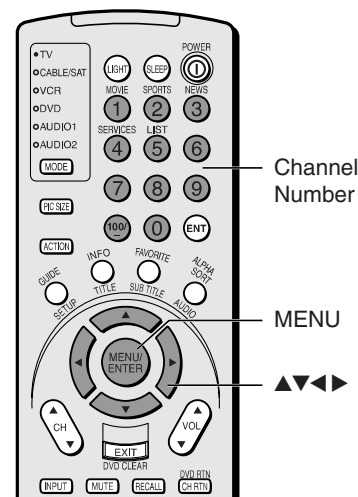


4. Press the Channel Number buttons to input the channel you want to label.

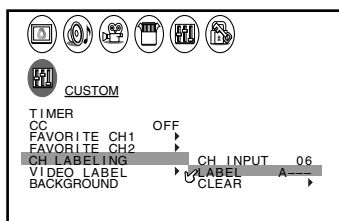


5. Press ▼ to highlight LABEL.

(Continued on next page)



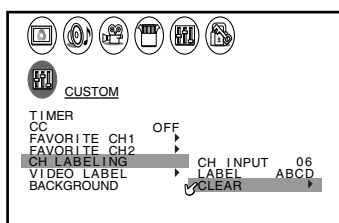
- Repeatedly press ◀ or ▶ to select a character for the first space, and then press ENTER.



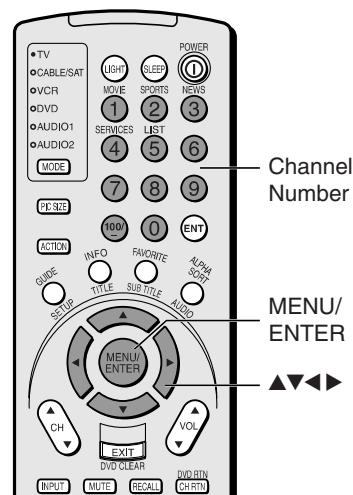
- Repeat step 6 to enter the rest of the characters.
For a blank space in the label name, select an empty space from the list of characters; otherwise, a dash “—” will appear in that space.
- Repeat steps 4 through 6 for other channels. You can assign labels to a maximum of 32 channels.

To clear a channel label:

- Press MENU, and then press ◀ or ▶ until the CUSTOM menu appears.
- Press ▲ or ▼ to highlight CH LABELING.
- Press ◀ or ▶ to display the CH LABELING menu.
- Press the Channel Number buttons to input the channel number whose label you want to clear.
- Press ▼ to highlight CLEAR.



- Press ◀ or ▶ to clear the channel label.
- To clear other channel labels, press ▲ to highlight CH INPUT, and then repeat steps 4 through 6.

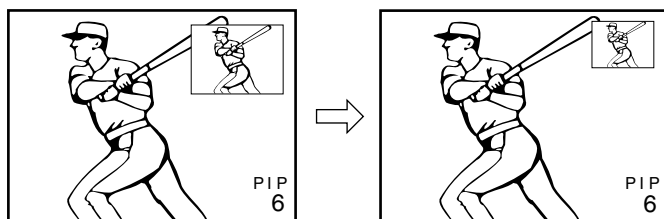


Watching picture-in-picture (PIP)

The picture-in-picture (PIP) feature allows you to watch two pictures at the same time. The smaller (PIP) picture can come from a TV broadcast or an external source, such as a VCR.

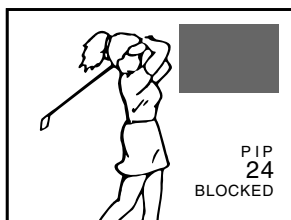
To display a TV broadcast in the PIP window:

1. Turn on the TV and select the program you want to watch.
2. Press PIP once to display a small picture. A window 1/9 the size of the screen will appear. Press PIP a second time to display a 1/16 size window.



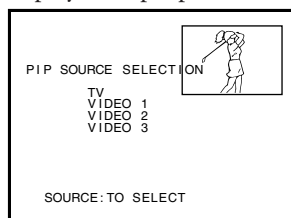
3. Press PIP CH ▲▼ to choose the program you want to display in the PIP window.

If the V-CHIP feature is active and you try to watch a TV program that exceeds the rating limits you set, the TV will enter the program block mode. See “Using the V-CHIP menu” on page 33.



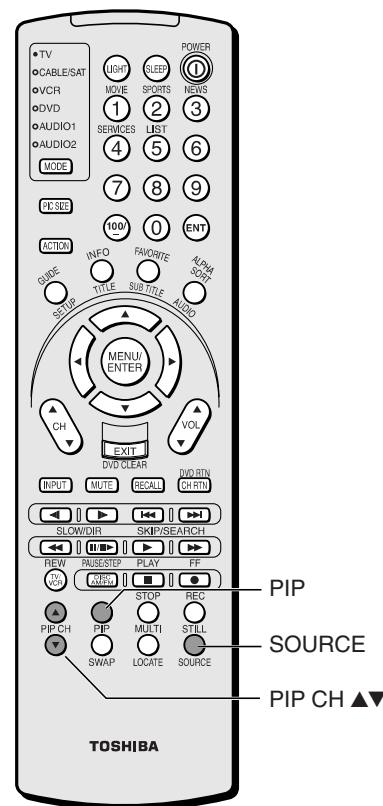
To display a picture from an external source in the PIP window:

1. Make sure you have connected the external source equipment properly. For more information, see the “Connecting your TV” on page 5.
2. Turn on the TV and select the program you want to watch.
3. Press PIP once to display a small picture. A window 1/9 the size of the screen will appear. Press PIP a second time to display a 1/16 size window.
4. Repeatedly press SOURCE to select the PIP input source (TV, VIDEO 1, VIDEO 2, or VIDEO 3). The selected source will be displayed in purple. ColorStream cannot be selected.



To turn PIP off:

Press PIP once or twice, depending on the PIP window size you selected.

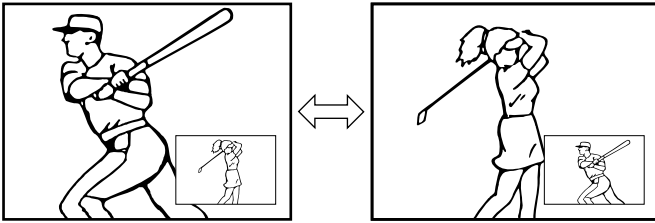


Note:

- PIP cannot be turned on when ColorStream input is being viewed.
- You cannot display ANT-2 signal sources in the PIP window.
- You can output the sound of either the main or PIP picture from the Audio OUT jacks (see “Selecting the audio OUT sound” on page 47).

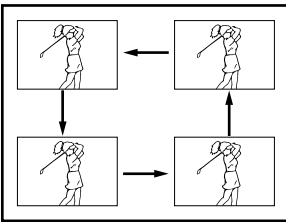
Switching the main and PIP pictures

Press SWAP while you are using the PIP feature to switch the main and PIP pictures. The main and PIP pictures will switch each time you press the SWAP button.



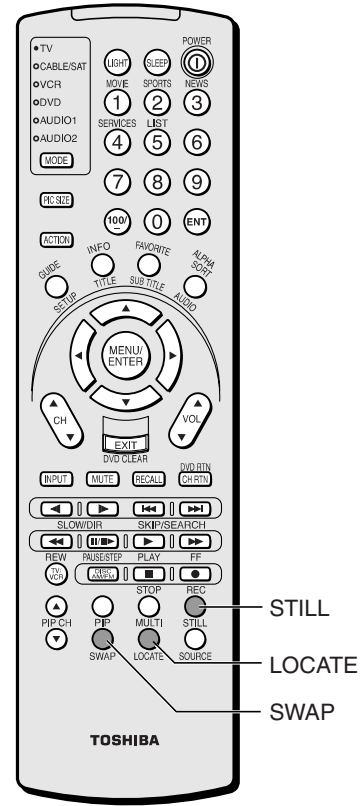
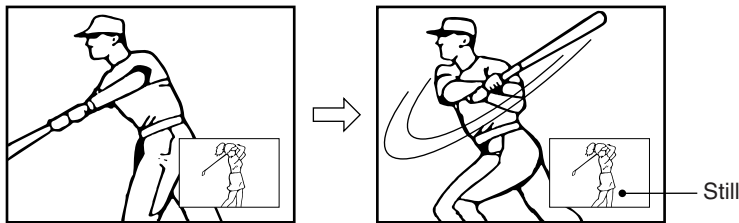
Changing the position of the PIP window

Press LOCATE repeatedly while you are using the PIP feature to change the position of the PIP window, in the following order:



Freezing the PIP picture

Press STILL while you are using the PIP feature to freeze the PIP picture. To return to the moving picture, press STILL again.



Using the multi-window feature

The multi-window feature provides two channel search functions (INFO and FAVORITE) and one strobe function (MULTI).

Using the multi-window channel preview function

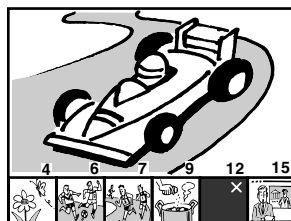
The channel preview function scans the channels you programmed into the TV's memory (pages 23–24) in a 6-picture multi-window across the bottom of the screen.

To start the channel preview function:

Press INFO.

To cancel the channel preview function:

Press INFO again.



Using the multi-window favorite channel scan function

The favorite channel scan function displays the channels you programmed as favorite channels (page 26) in a 9-picture multi-window.

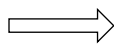
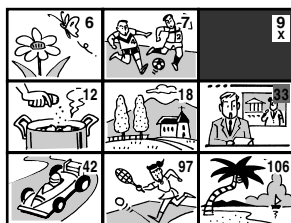
Note: If you press FAVORITE when no channels are programmed as favorite channels, the message "Not Available" will display on-screen.

To start the favorite channel scan function:

1. Press FAVORITE to display the channels you programmed into FAVORITE CH1. (Press FAVORITE a second time to display the channels you programmed into FAVORITE CH2.)

The 9-picture scan starts, with the first window displaying a moving picture.

2. Press ▲▼◀▶ to highlight the window of the channel you want to watch.
3. Press ENTER to display the channel you selected in step 2 as the main picture.



Each time you press FAVORITE, the displays changes in the following order:

FAVORITE CH1 — FAVORITE CH2 — OFF

To cancel the favorite channel scan function:

Press FAVORITE one or two times, depending on whether you are scanning the FAVORITE CH1 or FAVORITE CH2 channels.

Using the multi-window strobe function

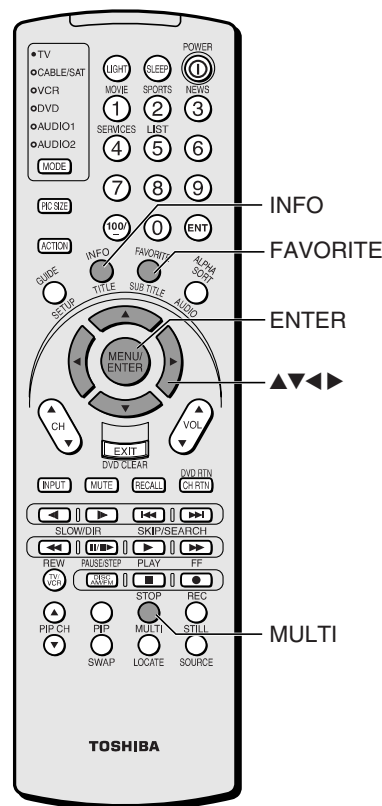
The strobe function strobes the current picture in a 9-picture multi-window. This function is convenient when watching a quickly moving picture. For example, you can strobe the action of the current TV program or view a decisive moment of a previously recorded sports program.

To start the strobe function:

Press MULTI.

To cancel the strobe function:

Press MULTI again.



Notes:

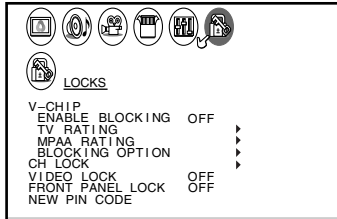
- When the main picture source is ColorStream, the INFO, FAVORITE, and MULTI functions are not available.
- The INFO button will not work when ANT 2 mode is selected.
- A program or channel you blocked in the LOCKS menu may not be blocked during INFO or FAVORITE multi-window scanning. When blocked properly, the program will appear as a black window with an "X" under the channel number.

Using the LOCKS menu

The LOCKS menu includes the V-CHIP, CH Lock, Video Lock, and New PIN Code functions. You can use these functions after entering the correct PIN code.

Entering the PIN code

1. Press MENU, and then press ◀ or ▶ until the LOCKS menu appears.



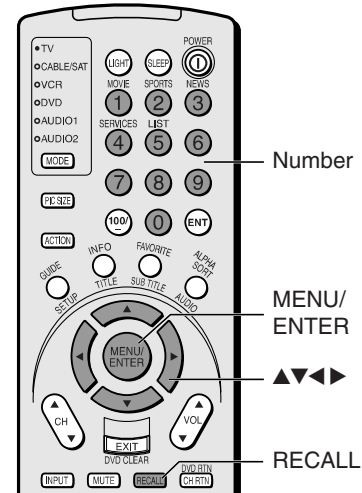
2. Press ▲ or ▼ to display the PIN code entering mode.
 - Blocking reset status:
Press the Number buttons (0–9) to enter a new 4-digit PIN code, and then press ENTER.
 - When the PIN code is already stored:
Press the Number buttons (0–9) to enter your existing PIN code, and then press ENTER.



If the wrong PIN code is entered, the message “Incorrect” displays. Enter the code again, and then press ENTER.

If you cannot remember the PIN code you stored, while in the PIN code entering mode, press RECALL four times within 5 seconds. The PIN code you stored will be released (blocking reset status restored).

Continue to set each item following the steps on the next page.



Using the V-CHIP menu

Some TV programs and movies include signals that classify the content of the program (violence, sex, dialog, language). The V-CHIP control feature in this TV detects the signals and blocks the programs according to your selections. To use this feature, perform the following setup.

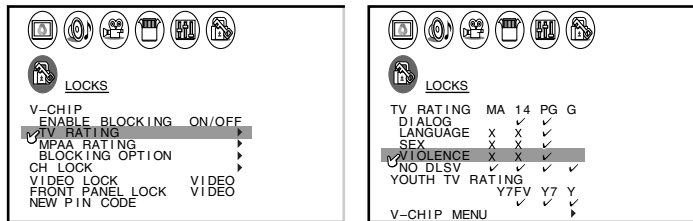
ENABLE BLOCKING

1. From the LOCKS menu, press ▼ or ▲ to highlight ENABLE BLOCKING.
2. Press ◀ or ▶ to select ON (locking enabled) or OFF (locking disabled).

Note: The CH LOCK function is not affected by this selection.

TV RATING (Independent rating system for broadcasters)

1. From the LOCKS menu, press ▼ or ▲ to highlight TV RATING (below left).
2. Press ◀ or ▶ to display the TV RATING menu (below right).

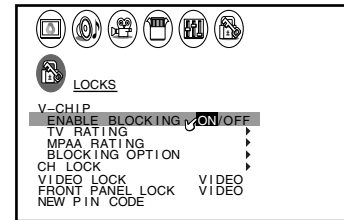


3. Press ▼ or ▲ to select an item.
4. Press ▶ to lock (displays "X"); press ◀ to unlock (displays "✓").
5. Repeat steps 3 and 4 to set the next item.

The TV age-based ratings and content themes you can lock are listed in the following table:

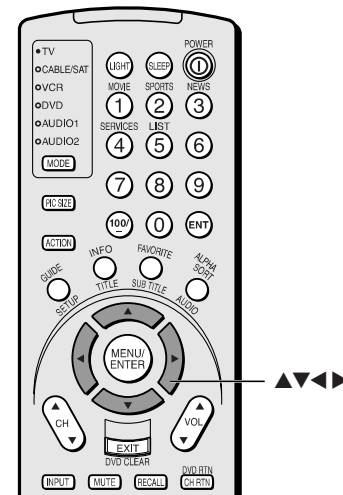
Ratings	Description and content themes
MA	Mature Audience Only (This program is specifically designed to be viewed by adults and therefore may be unsuitable for children under 17.) L) Crude or indecent language S) Explicit sexual activity V) Graphic violence
14	Parents Strongly Cautioned (This program contains some material that many parents would find unsuitable for children under 14 years of age.) D) Intensely suggestive dialog L) Strong, coarse language S) Intense sexual situations V) Intense violence
PG	Parental Guidance Suggested (This program contains material that parents may find unsuitable for younger children.) D) Some suggestive dialog L) Infrequent coarse language S) Some sexual situations V) Moderate violence
G	General Audience (Most parents would find this program suitable for all ages.)
Y7, Y7FV	Directed to Older Children (This program is designed for children age 7 and above. Note: Programs in which fantasy violence may be more intense or more combative than other programs in this category are designated Y7FV.)
Y	All Children (This program is designed to be appropriate for all children)

LOCKS menu

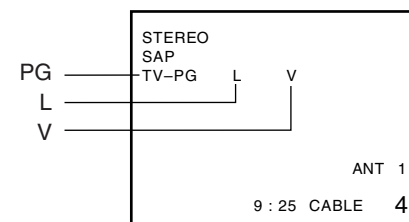


To select each item:

Press ▼ or ▲.

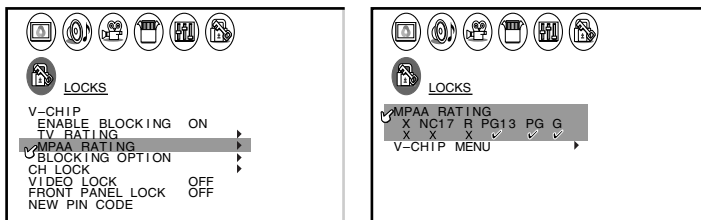


Press RECALL to confirm the rating of the current TV program.



MPAA RATING (Independent rating system for movies)

1. From the LOCKS menu, select MPAA RATING.
2. Press ◀ or ▶ to display the MPAA RATING menu, and then press ▼ or ▲ to highlight MPAA RATING (below left).
3. Press ◀ or ▶ to display the MPAA RATING menu (below right).



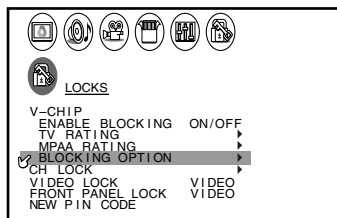
4. Press ▶ to lock ("X") or ◀ to unlock ("✓").

The movie ratings you can lock are described as follows:

- X : X-rated (For adults only)
- NC17: Not intended for anyone 17 and under
- R : Restricted (Under 17 requires accompanying parent or adult guardian)
- PG13 : Parents Strongly Cautioned (Some material may be inappropriate for children under 13)
- PG : Parental Guidance Suggested (Some material may not be suitable for children)
- G : General Audience (Appropriate for all ages)

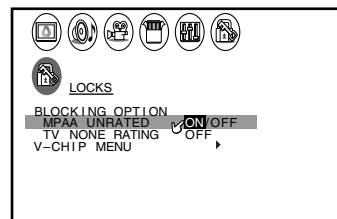
BLOCKING OPTION

1. From the LOCKS menu, select BLOCKING OPTION.
2. Press ◀ or ▶ to display the BLOCKING OPTION menu, and then press ▲ or ▼ to select the item.



MPAA UNRATED:

Press ◀ or ▶ to select ON (locked) or OFF (unlocked) for unrated programs in the MPAA rating system.

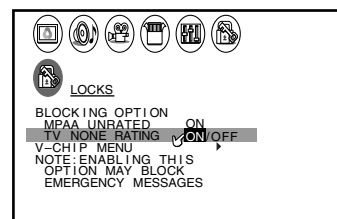


TV NONE RATING:

Press ◀ or ▶ to select ON (Lock) or OFF (Unlock) for programs rated NONE in the TV Parental Guidelines.

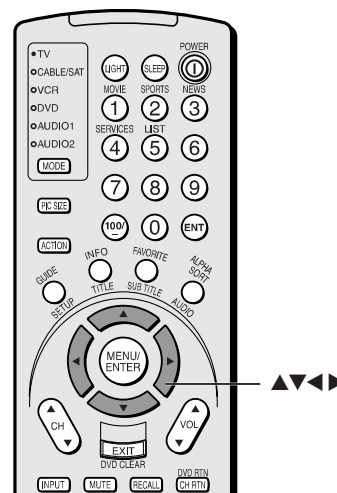
Caution: Setting the TV NONE RATING to ON may also block emergency messages.

Note: The PIP picture is not locked even if TV NONE RATING is set to ON (locked).



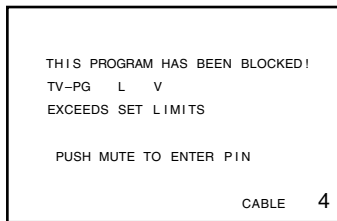
V-CHIP MENU:

Press ◀ or ▶ to return to the LOCKS menu.



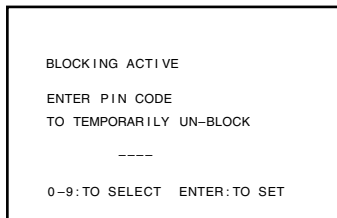
Unlocking programs temporarily

If you try to watch a TV program that exceeds the rating limits you set, the TV will enter the program lock mode.



To temporarily unlock the program:

1. Press MUTE.
2. Press the Channel Number buttons (0–9) to enter your 4-digit PIN code.

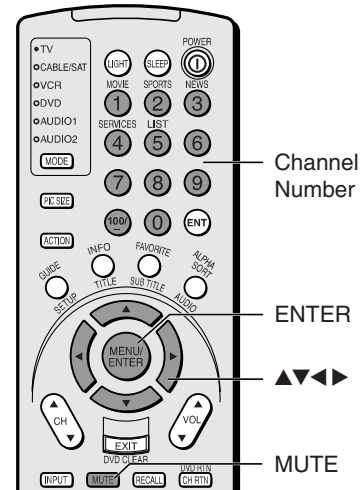


3. Press ENTER.

If the code is correct, the lock mode will be released and the normal picture will appear.

All locking is disabled until the TV is turned off, and will be enabled when the TV is turned on again.

If the wrong PIN code is entered, the message “Incorrect” appears. Enter the code again, and then press ENTER.



Locking channels

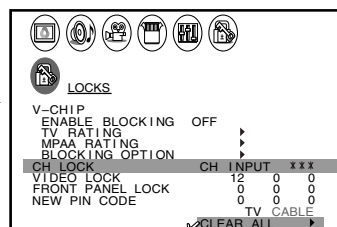
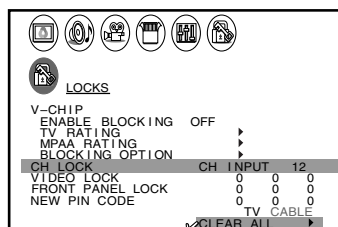
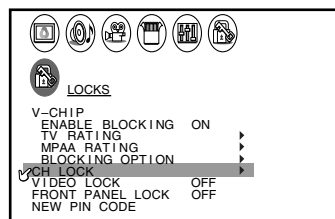
Use the CH LOCK feature to lock individual channels. You will not be able to tune locked channels until the setting is cleared.

You can lock a maximum of nine channels.

The current channel cannot be locked.

To lock channels:

1. From the LOCKS menu, select CH LOCK.
2. Press ◀ or ▶ to display the CH LOCK menu. CH INPUT will be highlighted (below left).
3. Press the Channel Number buttons to enter the channel number to be locked, and then press ENTER. The channel number will be added to the list (below right).

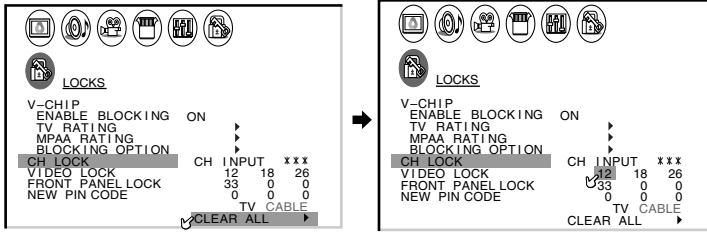


4. Repeat step 3 to lock other channels.

(Continued on next page)

To unlock a channel:

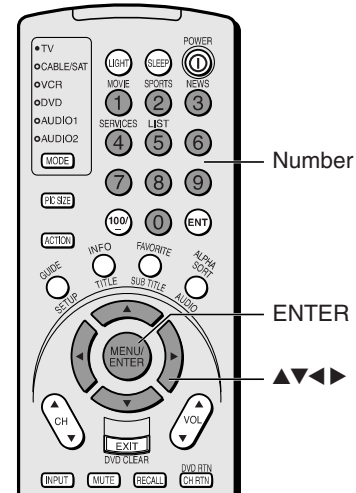
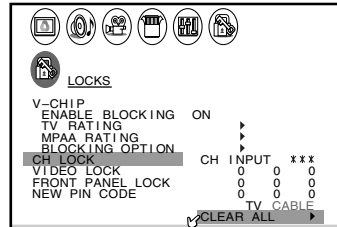
1. From the LOCKS menu, select CH LOCK.
2. Press ◀ or ▶ to display the CH LOCK menu. CH INPUT will be highlighted.
3. Press ▲▼◀▶ to highlight the channel to be unlocked.



4. Press ENTER.
5. Repeat steps 3 and 4 for other channels you want to unlock.

To unlock all channels at once:

Press ▲▼◀▶ to highlight CLEAR ALL in step 3 above, and then press ◀ or ▶. All channel numbers will be replaced with "0" in the list.

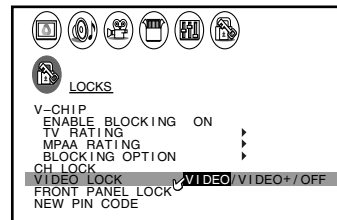


Locking the video inputs

You can use the VIDEO LOCK feature to lock out the input sources (Video 1, Video 2, Video 3, ColorStream) and channels 3 and 4. You cannot select the input sources until the setting is cleared.

To set up the video lock:

1. From the LOCKS menu, select VIDEO LOCK.
2. Press ◀ or ▶ to highlight a video lock level, as follows:
VIDEO: Locks Video 1, Video 2, Video 3, and ColorStream.
VIDEO±: Locks Video 1, Video 2, Video 3, ColorStream, and channels 3 and 4. Use this option if you connect your VCR through ANT2. **Note:** Make sure the PIP window is not tuned to channel 3 or 4.
OFF: Unlocks all video input sources.



Note:

The VIDEO LOCK feature is independent of the ENABLE BLOCKING option.

Locking the front panel buttons

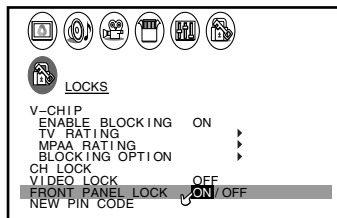
The front panel buttons can be locked to prevent the TV settings from being changed accidentally (by children, for example). When the front panel lock is ON, all control buttons on the TV front panel (except POWER) do not operate.

To lock the front panel buttons:

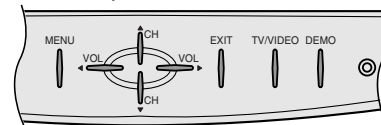
1. From the LOCKS menu, select FRONT PANEL LOCK.
2. Press ◀ or ▶ to highlight ON.

To unlock the front panel buttons:

Highlight OFF in step 2 above.



TV front panel

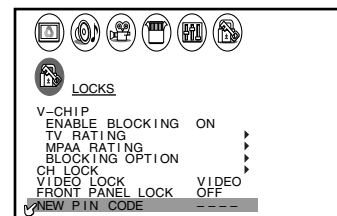


All buttons (except POWER) are locked when the FRONT PANEL LOCK is ON.

Note: If a button on the front panel is pressed when the front panel lock feature is ON, the message "Not Available" appears.

Changing the PIN code

1. From the LOCKS menu, select NEW PIN CODE.
2. Press the Number buttons (0–9) to enter a 4-digit code. The numbers you enter will replace the dashes in the display.
3. Press ENTER. The new PIN code is now active.



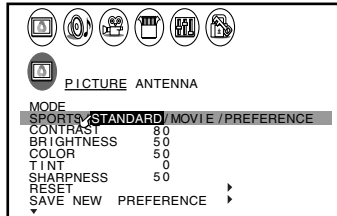
Adjusting the picture

Selecting the picture mode

You can select your desired picture type from four preset picture modes: sports, standard, movie, and preference.

To select the picture mode:

1. Press MENU, then press ◀ or ▶ until the PICTURE menu appears.
2. Press ▼ or ▲ to select MODE.
3. Press ◀ or ▶ to highlight the mode you prefer.



The table below describes the effects of the different preferences.

Mode	Picture Quality
Sports	Bright and dynamic picture (factory-set)
Standard	Standard picture setting (factory-set)
Movie	Movie-like picture setting (factory-set)
Preference	Your personal preferences*

*(see "Saving your new picture preferences" on page 38.)

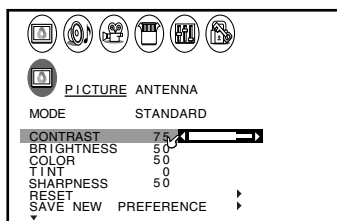
Adjusting the picture quality

You can adjust the picture quality to your personal preferences, including the contrast, brightness, color, tint, sharpness, flesh tone (page 38), noise reduction (page 38), and color temperature (page 39).

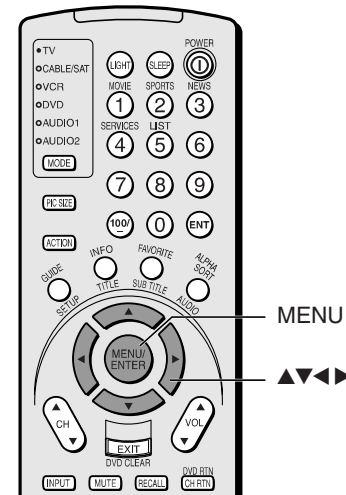
Selection	◀ Pressing ▶	
contrast	lower	higher
brightness	darker	lighter
color	paler	deeper
tint	reddish	greenish
sharpness	softer	sharper

To adjust the picture quality:

1. Press MENU, and then press ◀ or ▶ until the PICTURE menu appears.
2. Press ▼ or ▲ to highlight the quality you want to adjust.
3. Press ◀ or ▶ to adjust the level.



The PICTURE qualities you have adjusted can be saved in the TV's memory with the SAVE NEW PREFERENCE feature (see page 38). You can select your preferences or choose factory-set modes (see "Selecting the picture mode" above).



Note:

You must save your new picture quality settings before closing the PICTURE menu, or the TV will return to the previous mode. See "Saving your new picture preferences" on page 38.

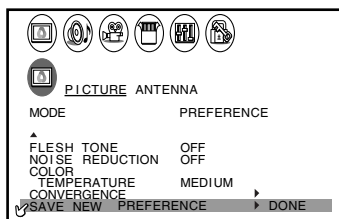
If you select SPORTS, STANDARD, or MOVIE picture mode and then change a picture quality setting (for example, increase the contrast), the picture mode automatically changes to PREFERENCE.

Saving your new picture preferences

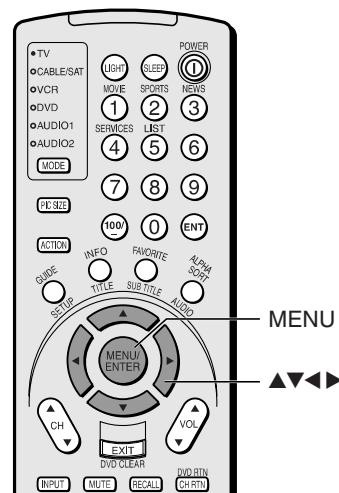
You can save the PICTURE qualities you adjusted (contrast, brightness, color, tint, and sharpness) in the picture PREFERENCE mode.

To save your new picture preferences:

1. Press MENU, and then press ◀ or ▶ until the PICTURE menu appears.
2. Press ▲ or ▼ to highlight SAVE NEW PREFERENCE.
3. Press ◀ or ▶. When saved, the menu displays “DONE.”



You can choose your saved preferences by selecting the PREFERENCE mode (see “Selecting the picture mode” on page 37).

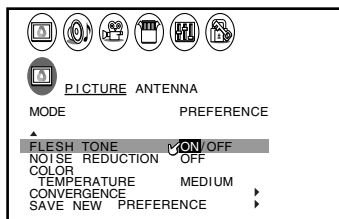


Using the flesh tone feature

This feature makes flesh tones appear more natural by correcting the tint.

To turn on the flesh tone feature:

1. Press MENU, and then press ◀ or ▶ until the PICTURE menu appears.
2. Press ▲ or ▼ to highlight FLESH TONE.
3. Press ◀ or ▶ to highlight ON.



To turn off the flesh tone feature:

Highlight OFF in step 3 above.

Using the noise reduction feature

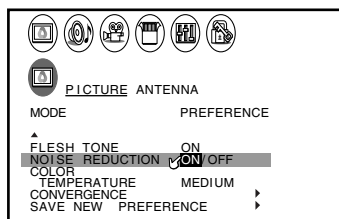
This feature allows you to reduce visible interference in your TV picture. This is useful when receiving a broadcast with a weak signal or playing a video tape or disc damaged by repeated use.

To turn on the noise reduction feature:

1. Press MENU, and then press ◀ or ▶ until the PICTURE menu appears.
2. Press ▲ or ▼ to highlight NOISE REDUCTION.
3. Press ◀ or ▶ to highlight ON.

To turn off the noise reduction feature:

Highlight OFF in step 3 above.



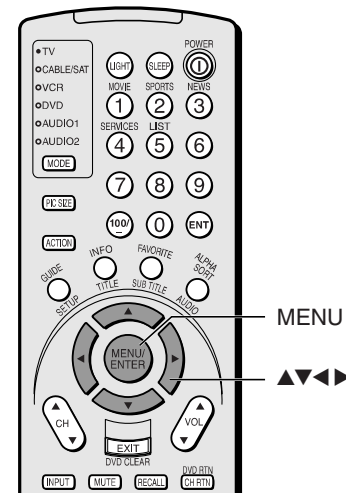
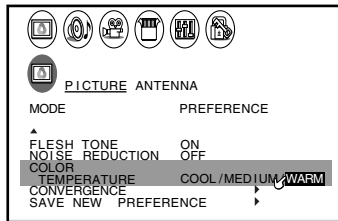
Selecting the color temperature

You can change the quality of the picture by selecting from three preset color temperatures: cool, medium, and warm.

Mode	Picture Quality
cool	blueish
medium	neutral
warm	reddish

To select the color temperature:

1. Press MENU, and then press ◀ or ▶ until the PICTURE menu appears.
2. Press ▲ or ▼ to highlight COLOR TEMPERATURE.
3. Press ◀ or ▶ to highlight the mode you prefer.



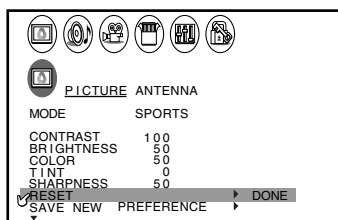
Resetting your picture adjustments

The RESET function returns the picture qualities to the following factory settings:

Contrast max (100)	Color temperature COOL
Brightness center (50)	Noise reduction OFF
Color center (50)	Picture mode SPORTS
Tint center (0)	
Sharpness center (50)	

To reset your picture adjustments:

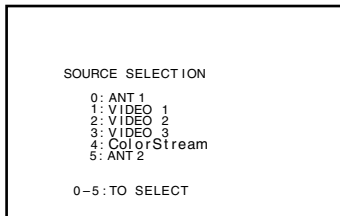
1. Press MENU, and then press ◀ or ▶ until the PICTURE menu appears.
2. Press ▲ or ▼ to highlight RESET.
3. Press ◀ or ▶. When reset, the menu displays "DONE."



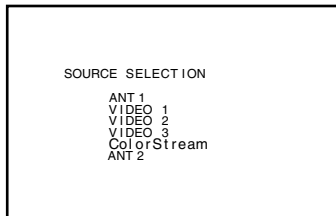
Watching video input

To view a signal from another device connected to the TV (such as a VCR or DVD player), press INPUT on the remote control (or TV/VIDEO on the TV) to change the video input (see illustrations below).

Select VIDEO 1, VIDEO 2, VIDEO 3, or ColorStream, depending on which input jack is used for connecting the specific device (see “Connecting your TV” on page 5).



Pressing INPUT on the remote control displays this screen. To select, press 0-5.

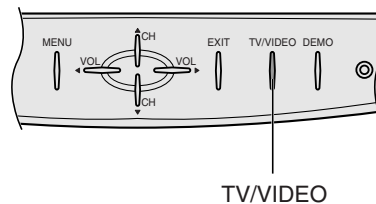


Pressing TV/VIDEO on the TV displays this screen. To select, press TV/VIDEO.

Note:

When ColorStream is selected, the video OUT signal will not have color.

To receive a color video OUT signal, a video or S-video IN jack must be used instead of the ColorStream connection.



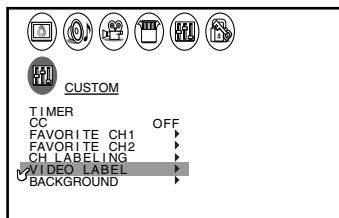
Selecting the video source labels

This feature allows you to rename the video sources for your TV from the following preset list of labels:

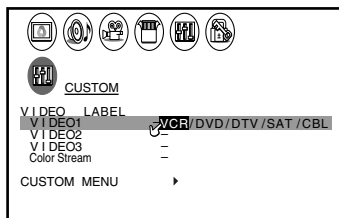
- : Uses the default label name
- VCR : Video cassette recorder
- DVD : DVD video player
- DTV : Digital TV set-top box
- SAT : Satellite box
- CBL : Cable box

To label the video sources:

1. Press MENU, and then press ◀ or ▶ until the CUSTOM menu appears.
2. Press ▲ or ▼ to highlight VIDEO LABEL.



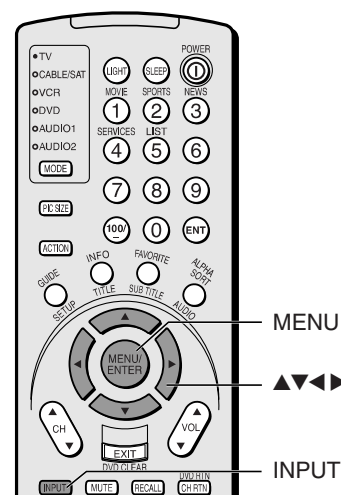
3. Press ◀ or ▶ to display the VIDEO LABEL menu.
4. Press ▲ or ▼ to highlight the video source you want to label.
5. Press ◀ or ▶ to select the appropriate label for that input source.



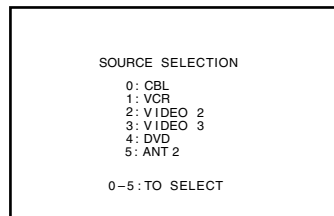
6. Finish labeling the other video sources as desired. To return to the previous menu, press ▲ or ▼ to highlight CUSTOM MENU, and then press ◀ or ▶.

To exit the menu, press EXIT.

When you press INPUT (or TV/VIDEO), the on-screen display will change according to the labels you assigned (see sample at right).



Sample video labels



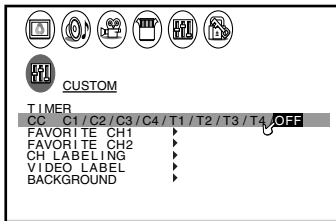
Using the closed caption feature

The closed caption feature has two options:

- **Captions**—A printed version of the dialogue, narration and/or sound effects of a program. Close captioned programs are usually designated as “CC” in program guides.
- **Text**—An on-screen display of information not related to the program, such as weather or stock data (when provided by individual stations).

To view captions or text:

1. Tune the TV to the desired program.
2. Press MENU, and then press ◀ or ▶ until the CUSTOM menu appears.
3. Press ▼ or ▲ to highlight CC.



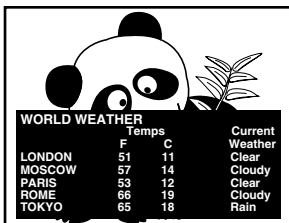
4. Press ◀ or ▶ to highlight the desired closed caption mode, as follows:
 - To view captions, highlight C1, C2, C3, or C4 (C1 displays the primary language in your area).

Note: If the program or video you are viewing is not closed captioned, no captions will display on-screen.

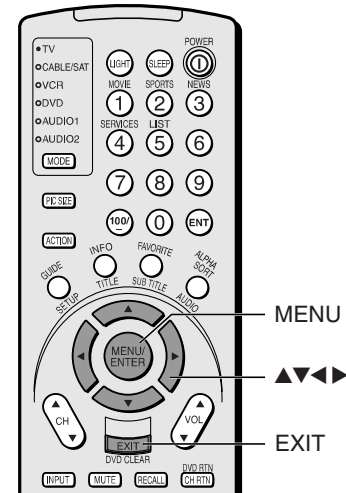


- To view text, highlight T1, T2, T3, or T4.

Note: If text is not available, a black rectangle may appear on-screen. If this happens, set the closed caption feature to OFF.



- To turn off the closed caption feature, highlight OFF.



Note:

A closed caption signal may not display in the following situations:

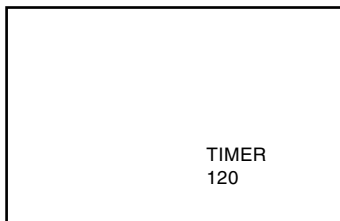
- When a video tape has been dubbed
- When the signal reception is weak
- When the signal reception is nonstandard

Setting the sleep timer

You can use the sleep timer to turn the TV off automatically.

To set the sleep timer:

1. Press SLEEP. Each time you press SLEEP, the time will increase in 10-minute increments, to a maximum of 180.



2. Press ENTER to start the timer.

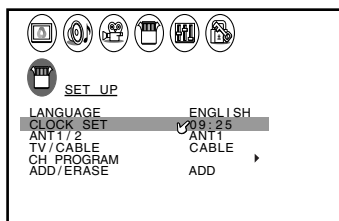
To cancel the sleep timer:

Press SLEEP until the time is set to 0, or turn off the TV.

Setting the clock

To set the clock:

1. Press MENU, and then press ◀ or ▶ until the SET UP menu appears.
2. Press ▲ or ▼ to highlight CLOCK SET.
3. After the number position starts to blink, press four Number buttons (0–9) to enter the correct time, and then press ENTER. The clock operates on a 12-hour cycle.



To display the time on-screen:

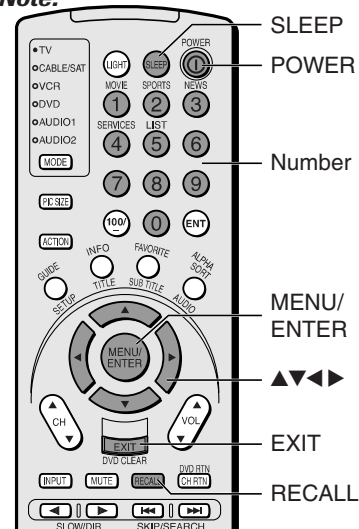
Press RECALL.

Note :

The timer can also be set using the MENU and ▲▼◀▶ buttons.

To display the amount of time until the TV turns off automatically, press SLEEP once. To close the display, press EXIT.

Note:



If the power source for the TV is interrupted (the power cord is unplugged or a power failure occurs), the clock must be reset.

Adjusting the sound

Muting the sound

Press MUTE to temporarily dim the sound (1/2 mute) or turn off the sound (mute). The screen will display “1/2 MUTE” or “MUTE” in the lower right corner. Each time MUTE is pressed, the mute mode changes in the following order:

→ 1/2 MUTE → MUTE → Normal

When the TV is muted, the closed caption feature (page 41) is automatically activated (but only if the closed caption mode is set to OFF). To turn off captions, press MUTE again.

Selecting stereo/SAP broadcasts

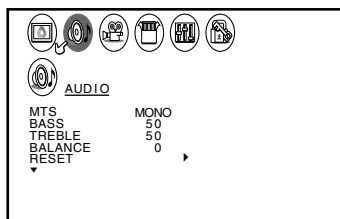
The multi-channel TV sound (MTS) feature allows you to listen to high-fidelity stereo sound while watching your TV. MTS can also transmit a second audio program (SAP) containing a second language, music, or other audio information (if available in your area).

When the TV receives a stereo or SAP broadcast, the word STEREO or SAP appears on-screen every time the TV is turned on, the channel is changed, or RECALL is pressed.

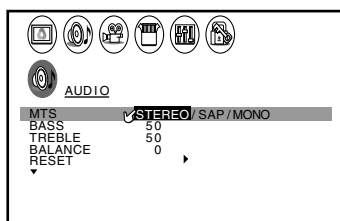
Note: The MTS feature is not available when the TV is in VIDEO or ColorStream mode.

To listen to stereo sound:

1. Press MENU, and then press ◀ or ▶ until the AUDIO menu appears.



2. Press ▲ or ▼ to highlight MTS.
3. Press ◀ or ▶ to highlight STEREO.

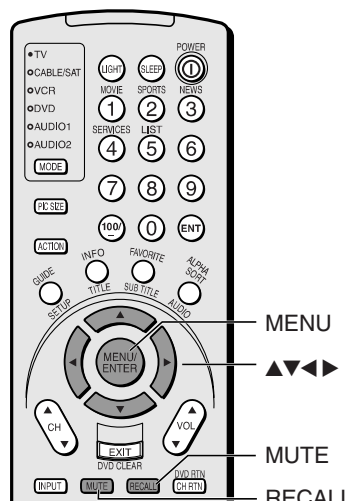


If you leave the TV in STEREO mode, it will automatically output the type of sound being broadcast (stereo or monaural).

If the stereo sound is noisy, select MONO to reduce the noise. The word STEREO or SAP is displayed in yellow in the menu when the TV receives the signal.

To listen to SAP (if available):

1. Press MENU, and then press ◀ or ▶ until the AUDIO menu appears.
2. Press ▲ or ▼ to highlight MTS.
3. Press ◀ or ▶ to highlight SAP. You will hear the station's second audio program (if available) from the speakers, while viewing the program's normal picture (see note at right).



Note:

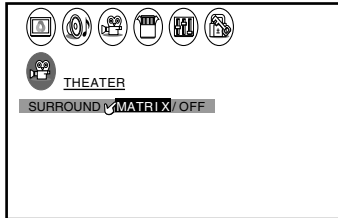
A second audio program (SAP) can be heard only on those TV stations that offer it. If you have SAP on, and the station the TV is currently tuned to is in SAP mode but is not currently playing a second audio program, you will see the picture but may not hear sound. If this happens, turn SAP off.

Using the surround sound feature

The surround sound feature expands the audio listening field wider and deeper to create exceptional sound quality from the TV's speakers. The feature uses stereo signals from a TV broadcast or video input.

To turn on the surround sound feature:

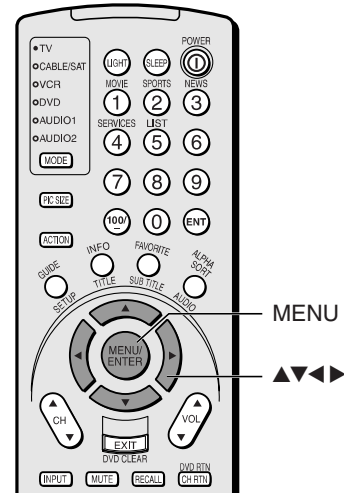
1. Select the STEREO mode (see "Selecting stereo/SAP broadcasts" on page 43).
2. Press MENU, and then press ◀ or ▶ until the THEATER menu appears.
3. Press ▲ or ▼ to highlight SURROUND.
4. Press ◀ or ▶ to highlight MATRIX.



To turn off the surround sound feature:

Highlight OFF in step 4 above.

If you leave the TV in MATRIX mode, it will automatically output the type of sound being broadcast (surround stereo or monaural).



Note:

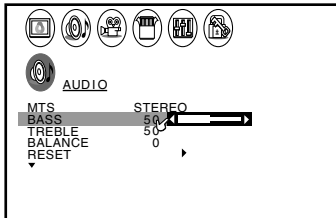
When MATRIX surround is selected, the StableSound™ feature (page 47) is automatically turned off.

Adjusting the sound quality

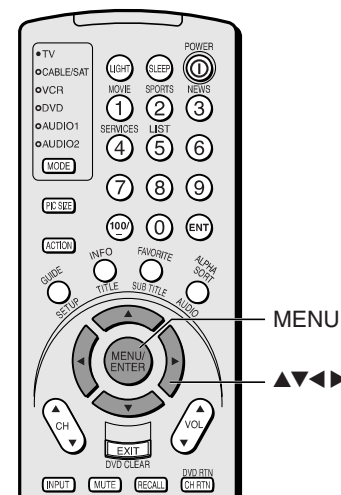
You can change the quality of the TV's sound by adjusting the bass, treble, and balance.

To adjust the sound quality:

1. Press MENU, and then press ◀ or ▶ until the AUDIO menu appears.
2. Press ▲ or ▼ to highlight the item you want to adjust.



3. Press ◀ or ▶ to adjust the level.
 - ◀ makes the sound quality weaker or decreases the balance in the right channel, depending on the item selected.
 - ▶ makes the sound quality stronger or decreases the balance in the left channel, depending on the item selected.



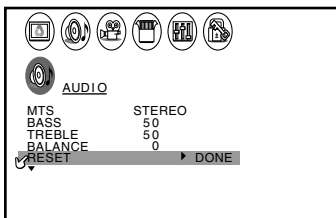
Resetting your audio adjustments

The RESET function resets your audio adjustments to the following factory settings:

Bass center (50)
Treble center (50)
Balance center (0)

To reset your audio adjustments:

1. Press MENU, and then press ◀ or ▶ until the AUDIO menu appears.
2. Press ▲ or ▼ to highlight RESET.
3. Press ◀ or ▶. When reset, the menu displays "DONE."

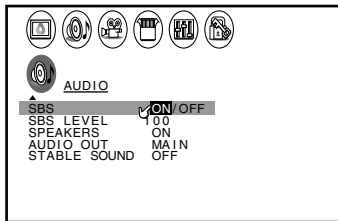


Using the sub-bass system (SBS)

The sub-bass system allows you to enhance the TV's bass performance (even when the volume is low).

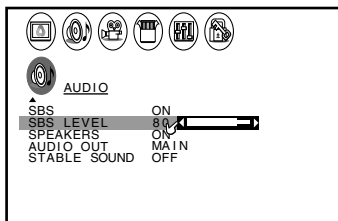
To turn on the SBS:

1. Press MENU, and then press ◀ or ▶ until the AUDIO menu appears.
2. Press ▲ or ▼ to highlight SBS.
3. Press ◀ or ▶ to highlight ON.



To adjust the SBS level:

4. Press ▲ or ▼ to highlight SBS LEVEL.
5. Press ◀ or ▶ to adjust the SBS level.



To turn off the SBS:

Highlight OFF in step 3 above.

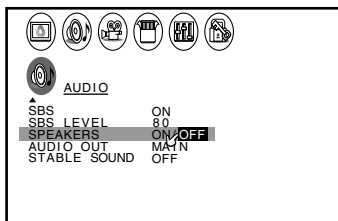
Turning off the built-in speakers

Use this feature to turn the TV speakers off when you connect an audio system (see "Connecting an audio system" on page 9.)

Note: Make sure the volume control of your audio amplifier is set to a moderate listening level.

To turn off the built-in speakers:

1. Press MENU, and then press ◀ or ▶ until AUDIO menu appears.
2. Press ▲ or ▼ to highlight SPEAKERS.
3. Press ◀ or ▶ to highlight OFF.

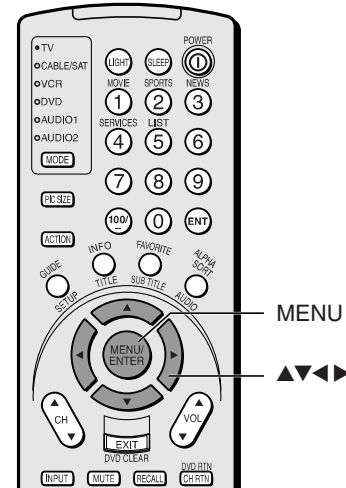


To turn on the built-in speakers:

Highlight ON in step 3 above.

Note:

The SBS signal does not pass through the "Variable Audio OUT" jacks (see "Connecting an audio system" on page 9); however, the AUDIO menu will appear when the buttons are pressed.



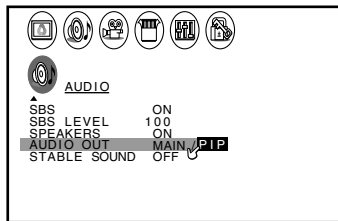
Selecting the Audio OUT sound

This feature allows you to select the sound (MAIN or PIP) that is output from the Audio OUT jacks.

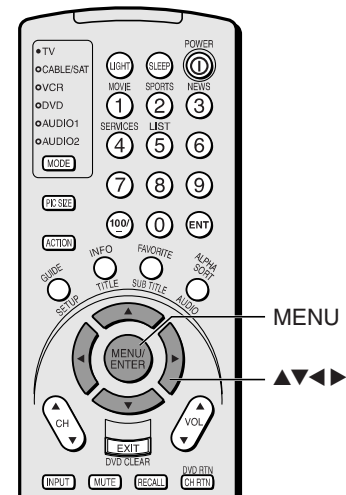
This is useful when amplifying or recording the PIP sound with external equipment while hearing the sound of the main picture through the built-in speakers.

To select the Audio OUT sound:

1. Press MENU, then press ◀ or ▶ until the AUDIO menu appears.
2. Press ▲ or ▼ to highlight AUDIO OUT.
3. Press ◀ or ▶ to highlight MAIN or PIP.



- MAIN: Main picture sound.
- PIP: Selected PIP sound.

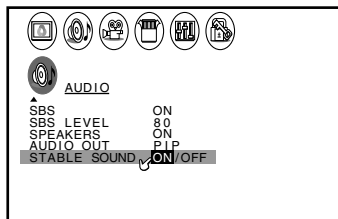


Using the StableSound™ feature

The StableSound™ feature limits the highest volume level to prevent extreme changes in volume when the signal source is changed.

To turn on the StableSound feature:

1. Press MENU, and then press ◀ or ▶ until the AUDIO menu appears.
2. Press ▲ or ▼ to highlight STABLE SOUND.
3. Press ◀ or ▶ to select ON.



To turn off the StableSound feature:

Highlight OFF in step 3 above.

Note:

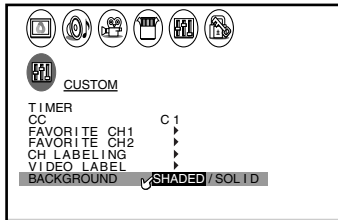
When the StableSound™ feature is turned on, the surround feature is automatically turned off (see page 44).

Selecting the background of the menu display

You can change the background of the menu display by selecting from two preset types: shaded and solid (gray).

To select the background:

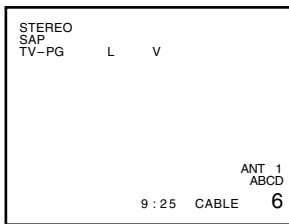
1. Press MENU, and then press ◀ or ▶ until the CUSTOM menu appears.
2. Press ▲ or ▼ to highlight BACKGROUND.
3. Press ◀ or ▶ to highlight either SHADED or SOLID.



Displaying on-screen information

Press RECALL to display the following information on-screen:

- Antenna mode (when in TV mode)
- Channel number or VIDEO mode selected
- Time (if set)
- Channel label (if set)
- Stereo or SAP (second audio program) audio status
- V-CHIP rating status



Viewing the demonstration mode

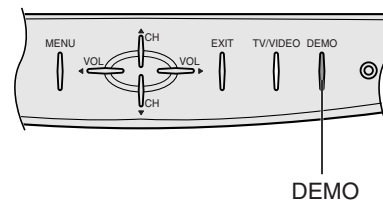
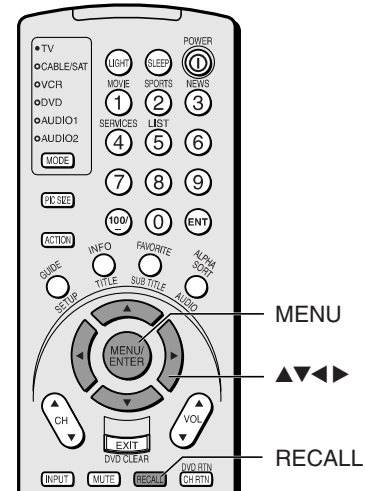
The demonstration mode automatically displays a variety of the TV's on-screen menus and special features. This function is provided for demonstration purposes only.

To start the demonstration mode:

Press DEMO.

To stop the demonstration mode:

Press DEMO, RECALL, EXIT, or POWER.



Understanding the auto power off feature

The TV will automatically turn off after approximately 15 minutes if it is tuned to a vacant channel or a station that completes its broadcast for the day. This feature does not work in VIDEO mode.

Understanding the last mode memory feature

If the power is cut off while you are viewing the TV, the Last Mode Memory feature turns the TV on automatically when the power is resupplied.

If the power is going to be off for a long time and you are going to be away from the TV, unplug the power cord to prevent the TV from turning on in your absence.

Appendix

Specifications

Television System	NTSC standard
Channel Coverage	VHF: 2 through 13 UHF: 14 through 69 Cable TV: Mid band (A-8 through A-1, A through I) Super band (J through W) Hyper band (AA through ZZ, AAA, BBB) Ultra band (65 through 94, 100 through 125)
Power Source	120 V AC, 60 Hz
Power Consumption	144 W (average)
Audio Power	14 W + 14 W
Speaker Type	Two 6-1/4 inches (16 cm) round
Video/Audio Terminals	S-VIDEO INPUT Y-INPUT: 1 V(p-p), 75 ohm, negative sync. C-INPUT: 0.286 V(p-p) (burst signal), 75 ohm VIDEO/AUDIO INPUT VIDEO: 1 V(p-p), 75 ohm, negative sync. AUDIO: 150 mV(rms) (30% modulation equivalent, 47 kohm) ColorStream® (component video) INPUT Y : 1V(p-p), 75 ohm Pr (Cr): 0.7 V(p-p), 75 ohm Pb (Cb): 0.7 V(p-p), 75 ohm AUDIO: 150 mV(rms), 47 kohm VIDEO/AUDIO OUTPUT VIDEO: 1 V(p-p), 75 ohm, negative sync. AUDIO: 150 mV(rms) (30% modulation equivalent, 4.7 kohm) VARIABLE AUDIO OUTPUT 0–300 mV(rms) (30% modulation equivalent, 4.7 kohm) AUDIO CENTER CHANNEL INPUT 300 mV(rms) (30% modulation equivalent, 10 kohm)
Dimensions	Width: 44-7/8 inches (1139 mm) Height: 53-5/16 inches (1354 mm) Depth: 22-3/4 inches (578 mm)
Mass	240 lbs (109 kg)
Supplied Accessories	Remote control with 2 size “AA” alkaline batteries

Design and specifications are subject to change without notice.

Troubleshooting

Before calling a service technician, please check the following table for a possible cause of the problem and some solutions.

Problem	Solution
TV will not turn on	<ul style="list-style-type: none">• Make sure the power cord is plugged in, and then press POWER.• The remote control batteries may be dead. Replace the batteries.
No picture, no sound	<ul style="list-style-type: none">• Check the antenna/cable connections.• Press INPUT on the remote control (or TV/VIDEO on the TV) to check the main picture source.
No sound, picture OK	<ul style="list-style-type: none">• The sound may be muted. Press VOLUME.• The station may have broadcast difficulties. Try another channel.• Make sure the SPEAKERS function in the AUDIO menu is set correctly.
Poor sound, picture OK	<ul style="list-style-type: none">• The station may have broadcast difficulties. Try another channel.
Poor picture, sound OK	<ul style="list-style-type: none">• Check the antenna connections.• The station may have broadcast difficulties. Try another channel.• Adjust the PICTURE menu.
Poor reception of broadcast channels	<ul style="list-style-type: none">• The station may have broadcast difficulties. Try another channel.• Check the antenna connections.• If you are using a VCR, make sure the TV/VCR button is set correctly.
Cannot receive above channel 13	<ul style="list-style-type: none">• Make sure the TV/CABLE switch is set to the mode that corresponds with the signal source (cable company or antenna).
A black box appears on-screen	<ul style="list-style-type: none">• The closed caption feature may be set to one of the Text modes (T1, T2, T3, or T4). Set closed captioning to OFF.
Cannot select a certain channel	<ul style="list-style-type: none">• The channel may be locked out with the CH LOCK feature, or erased with the ADD/ERASE feature.
Multiple images	<ul style="list-style-type: none">• The station may have broadcast difficulties. Try another channel.• Antenna reception may be poor. Use a highly directional outdoor antenna.
Poor color or no color	<ul style="list-style-type: none">• The station may have broadcast difficulties. Try another channel.• Adjust the TINT and/or COLOR in the PICTURE menu.• The picture may suffer from color shading (caused by changing the direction of the TV when it is on). Turn off the TV and allow it to cool for 30 minutes.
No stereo or SAP sound from a known MTS broadcast	<ul style="list-style-type: none">• Make sure the MTS feature is set properly.
The remote control does not operate	<ul style="list-style-type: none">• Make sure the appropriate device mode is selected.• There may be an obstruction between the remote control and the remote control sensor. Remove the obstruction and retry the remote control.• The remote control batteries may be dead. Replace the batteries.
Cannot access signal input sources (VIDEO1, VIDEO2, VIDEO3, ColorStream) and/or channels 3 and 4	<ul style="list-style-type: none">• The VIDEO LOCK feature may be on. Set it to OFF.

Limited United States warranty

Toshiba America Consumer Products, Inc. ("TACP") and Toshiba Hawaii Inc. ("THI") make the following limited warranties. These limited warranties extend to the original consumer purchaser or any person receiving this set as a gift from the original consumer purchaser and to no other purchaser or transferee.

Limited One (1) Year Warranty

TACP and THI warrant this product and its parts against defects in materials or workmanship for a period of one (1) year after the date of original retail purchase. During this period, TACP and THI will repair or replace a defective part, at their option, with a new or refurbished part, without charge to you. TACP/THI Authorized Service Center personnel will come to your home when warranty service is required. Depending on the type of repair required, either the service will be performed in your home or the set will be taken to the TACP/THI authorized service center for repair and returned to your home at no cost to you.

Limited Two (2) Year Warranty of Picture Tube

TACP and THI further warrant the picture tube in this product against defects in materials or workmanship for a period of two (2) years after the date of original retail purchase. During this period, TACP and THI will repair or replace a defective picture tube at their option, with a new or refurbished picture tube, without charge to you, except that, if a defective picture tube is replaced after one (1) year from the date of the original retail purchase, you pay labor charges involved in the replacement.

Rental Units

The warranty for rental units begins with the first rental or thirty (30) days from the date of shipment to the rental firm, whichever comes first.

Commercial Units

Products sold and used for commercial use have a limited ninety (90) day warranty for all parts, labor and picture tube.

Owner's Manual and Demographic Card

You should read this owner's manual thoroughly before operating this product. You should complete and mail the enclosed Demographic card within ten days after you, or the person who has given you this product as a gift, purchased this product. This is one way to enable TACP/THI to provide you with better customer service and improved products. Failure to return the Demographic card will not affect your rights under this warranty.

Your Responsibility

The above warranties are subject to the following conditions;

- (1) You must retain your bill of sale or provide other proof of purchase.
- (2) All warranty servicing of this product must be made by an Authorized TACP/THI Service Center.
- (3) These warranties are effective only if the product is purchased and operated in the U.S.A. or Puerto Rico.
- (4) Labor service charges for set installation, setup, adjustment of customer controls, and installation or repair of antenna systems are not covered by this warranty. Reception problems caused by inadequate antenna systems are your responsibility.
- (5) Warranties extend only to defects in materials or workmanship as limited above, and do not extend to any product or parts that have been lost or discarded by you, or to damage to products or parts caused by misuse or accident, damage caused by Acts of God such as lightning or fluctuations in electric power, improper installation, improper maintenance, or use in violation of instructions furnished by us, or to units which have been modified or had the serial number removed, altered, defaced, or rendered illegible.

How to Obtain Warranty Service

If after following all of the operating instructions in this manual and checking the "Troubleshooting" section, you find that service is needed:

- (1) To find the nearest Toshiba Authorized Service Center, visit our web site at www.toshiba.com/tacp and click "Customer Solutions," or call us toll-free at 1-800-631-3811.
In Hawaii, contact Toshiba Hawaii, Inc., Service, 327 Kamakee Street, Honolulu, HI 96814, (808) 591-9281.
- (2) Present your bill of sale or other proof of purchase to the Authorized Service Center. "Authorized TACP/THI service center personnel will come to your home when warranty service is required. Depending on the type of repair required, either the service will be performed in your home or the TV set will be taken to the TACP/THI authorized service center for repair and returned to your home at no cost to you."

**For additional information, visit our web site:
www.toshiba.com/tacp**

All warranties implied by state law, including the implied warranties of merchantability and fitness for a particular purpose, are expressly limited to the duration of the limited warranties set forth above. With the exception of any warranties implied by state law as hereby limited, the foregoing warranty is exclusive and in lieu of all other warranties, guarantees, agreements and similar obligations of manufacturer or seller with respect to the repair or replacement of any parts. In no event shall TACP or THI be liable for consequential or incidental damages.

No person, agent, distributor, dealer or company is authorized to change, modify or extend the terms of these warranties in any manner whatsoever. The time within which action must be commenced to enforce any obligation of TACP or THI arising under this warranty or under any state or law of the United States or any state thereof, is hereby limited to 90 days from the date you discover, or should have discovered, the defect. This limitation does not apply to implied warranties arising under state law.

This warranty gives you specific legal rights and you may also have other rights which may vary from state to state. Some states do not allow limitation on how long an implied warranty lasts, when an action may be brought, or the exclusion or limitation of incidental or consequential damages; therefore, the above provisions may not apply to you.



ATTENTION CANADIAN CONSUMERS:

Canadian consumers are requested to complete the special Canadian "Warranty Registration Form" enclosed, and forward this completed form with a copy of the bill of sale to TOSHIBA OF CANADA to "Register and Validate" their warranty.

Products purchased in the U.S.A. and used in Canada are not covered by these warranties.
Products purchased in Canada and used in the U.S.A. are not covered by these warranties.
REV. 03/01

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